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Welcome to the Chartered Institute for Securities & Investment's Investment, Risk and Taxation study material.

This workbook has been written to prepare you for the Chartered Institute for Securities & Investment's Investment, Risk and Taxation examination.

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It is estimated that this manual will require approximately 140 hours of study time.

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Chapter One

Asset Classes

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This syllabus area will provide approximately 13 of the 80 examination questions



Investment risk and taxation are two key factors that every investor must consider when managing a portfolio. Risk refers to the possibility of an investment losing value or not performing as expected, while taxation refers to the taxes imposed on the income and gains generated by those investments. Together, these elements shape the overall returns that an investor can expect to receive.

Understanding how different asset classes behave, how they are taxed and the risks associated with them are key considerations for making informed investment decisions. In this chapter, we explore the various asset classes, and how each offers different levels of risk and tax implications. These insights will help you to build a strategy that aligns with your clients' financial goals and risk tolerance.

1. Cash and Cash Equivalents

Learning Objective

1.1.2 Analyse the main characteristics, risks and returns of cash deposits: liquidity; rates of interest; past returns; real returns; deposit takers; risks – inflation/deflation risk, interest rate risk and institutional risk; foreign currency deposits; costs, charges and penalties; requirement linked accounts; statutory protection, credit risk assessment of deposit-taking institutions and Financial Services Compensation Scheme (FSCS) limits

1.1 The Role of Cash Deposits

One of the key reasons for holding money in the form of cash deposits is **liquidity** – the ease and speed with which an investment can be turned into cash to meet spending needs.

- Deposits held in instant access accounts are highly liquid – that is, access can be gained to them immediately so that they can be used to meet spending needs as and when they arise.
- Even money held on other forms of deposit (eg, seven-day notice accounts) can be accessed reasonably quickly, and certainly more so than some other forms of asset.

We will look at various types of deposit and consider how easy it is for the savers to gain access to them later in this chapter. Many people are likely to have a need for cash at short notice, and so they should plan to hold some on deposit to meet possible needs and emergencies before considering riskier, and less liquid, assets.

The other main reasons are security, as a savings vehicle, and for the interest return that can be earned on them.

- Accounts for holding cash deposits are generally characterised by a high level of security.
- Capital is very unlikely to be lost, at least in monetary terms. The purchasing power of capital held on deposit will, however, be eroded by **inflation**.
- Against this, there is the reward of any interest receivable, and the rate of interest may exceed inflation, resulting in a real rate of return for the saver.

A cash deposit account (ie, any type of account at a banking institution that allows money to be deposited and withdrawn by the account holder) can serve as a vehicle for reaching a savings target; for example, when saving for the cost of a major purchase, or for the deposit (part-payment) on a house purchase.

1.2 Interest Rates

Cash deposits generally provide the saver with a return in the form of interest paid regularly, but no capital growth. The exception is accounts which are held chiefly for transactional purposes, such as **current accounts** (also called checking/chequing accounts, deposit accounts or transaction accounts, among other names). These types of accounts generally do not earn interest.

Interest is normally paid as a percentage of the capital deposited. Generally speaking:

- Deposit takers will pay higher rates of interest the larger the deposit (ie, they pay tiered rates). For example, an account holding £10 is likely to earn a lower rate of interest than one holding £10,000.
- Deposit takers will also pay higher rates of interest for longer-term deposits. An account offering instant access is likely to earn a lower rate of interest than one where the money is tied up for a year, for example.

This is not always the case, though. In some instances, the market rate for long-term deposits can actually fall below that for shorter-term ones – this is known as the inverse cash rate. This is relatively unusual, however, and savers often earn more for having tied their money up for longer.

Interest rates may be variable or fixed at the outset. For instant access and notice accounts, they are usually variable; and for fixed-term deposits, they are usually set for the entire term.

1.2.1 Gross and Net Interest Rates

If the interest rate quoted is described as gross, this means that it is the contractual rate of interest paid before the deduction of **income tax**.

If the interest rate is quoted as net, this is the rate that the saver receives after the deduction of any tax.

Regardless of whether an individual receives interest gross or net, it is the gross amount that is used to calculate their tax liability.

In the UK, for example, interest on a deposit account is paid gross (no tax is deducted at source).

The amount of tax that a saver pays depends on their income tax status, which is covered in sections 1 and 2 of chapter 4.

1.2.2 Compounding

Historically, cash deposits have given low returns compared with some other assets, but this is compensated for by a lower exposure to risk.

Customers attempting to compare the interest rates paid by one institution with those paid by another (or to compare the rates earned on a deposit with the returns on other assets) need to take into account timing factors.

As we saw in section 1.2, institutions may pay tiered interest rates. However, there may also be variations when interest is paid – eg, monthly, quarterly, annually – and a higher rate of interest may be payable for interest paid less frequently. This may be an important consideration for someone who is reliant on the interest for an income stream.

This means that if two accounts have the same nominal historical rate of interest, but Account A credits interest more regularly than Account B, then Account A will give the saver a better return (and more frequent income distributions).

Example

Two accounts pay 4% pa interest; but Account A pays it quarterly and Account B pays it annually. The saver leaves the interest in the account to roll up (ie, they do not take it out and spend it).

For a £10,000.00 account:

Account A pays 1% (ie, a quarter of 4%) at the end of Q1, taking it up to:

£10,000.00 x 101% = £10,100.00

At the end of Q2, another 1% interest is paid on this new total:
£10,100.00 x 101% = £10,201.00

At the end of Q3, 1% is paid on the total of £10,201.00:
£10,201.00 x 101% = £10,303.01

At the end of Q4, 1% is paid on the total of £10,303.01:
£10,303.01 x 101% = £10,406.04

The account has grown by £406.04

Account B has capital of £10,000 at the end of year 1, and pays 4% interest:
£10,000.00 x 104% = £10,400.00

There is a difference of £6.04 between these two accounts. This has come about because the account that pays more frequently is earning interest on the interest: the interest credited in the first quarter is added to the capital, on which interest is calculated at the end of the second quarter, and so on. This effect is called compounding.

If interest is paid regularly over several periods in a year, then the following formula should be used to compare the terminal wealth generated by each account:

$$T = C \times \left(1 + I/N\right)^{NY}$$

where:

T	=	the terminal wealth of the initial deposit at the end of the period
C	=	the initial capital deposited in the account
I	=	the annual rate of interest paid (expressed as a decimal)
N	=	the number of times in the year that interest will be paid
Y	=	the number of years over which interest will be paid

The term $(1 + (I / N))^{YN}$ is referred to as the compounding factor.

If the saver withdraws the quarterly interest payments from Account A, they will not get the compounding effect; however, they will get access to income that can be spent earlier than otherwise would be the case with Account B.

It is therefore very important to look at not just the headline rate of interest, but also how frequently this is calculated and applied to the account, and whether it is a flat or a compound rate.

1.2.3 Comparing Like with Like – the Annual Equivalent Rate (AER)

There are different ways in which institutions can show their current and historic interest rates, which can be very confusing for many customers and their advisers. In some countries, such as the UK, advertisements for savings or deposit accounts must show the nominal interest rate (also called the quoted or headline interest rate) along with what is called the **annual equivalent rate (AER)**.

The AER is a notional rate that is quoted on the interest paid on savings and investments. It provides a true rate of return, taking into account how often interest is credited to an account during any 12-month period (this is generally 365 days, although institutions may apply a day basis to allow for leap years). This shows what the return will be if the interest is compounded and paid annually, instead of monthly or quarterly; therefore, it lets savers compare one account with another on a like-for-like basis.

The AER is usually quoted gross, thus allowing the comparison of two flat rates from different deposit takers or accounts without the complication of trying to work out the effect of one deposit taker applying interest more frequently than another. Accounts that pay interest monthly or quarterly, compared to annually, will have a higher quoted AER, to reflect the impact of the compounding of interest on interest.

AERs only apply where interest is left to roll over in the account for the whole period; if the saver withdraws it, the AER will no longer be meaningful.

1.2.4 Real Returns

The amount of interest received on cash deposits can be measured as a real rate of return by comparing the nominal interest rate with the expected **future** rate of inflation over the period under consideration. A real return is one that the saver expects to earn after allowing for inflation.

The relationship between the nominal and real interest rates and the rate of inflation is described more formally by the Fisher equation. Named after American economist Irving Fisher, this equation states that the real interest rate is approximately equal to the nominal interest rate minus the expected future rate of inflation in the deposit period:

$$\text{Real rate of return} = \text{Nominal interest rate} - \text{Rate of inflation}$$

For example, if the annual interest is paid at a nominal rate of 5% and the rate of inflation is 2%, then the real rate of return is approximately 3%. In other words, the purchasing power of the cash is increasing at 3% per year.

Interest rates on cash deposits will generally move approximately in tandem with rates of interest on borrowing; deposit takers obtain income from the difference (the margin) between the deposit rates they pay (the bid rate, which is the lower quote) and the rates they charge to borrowers (the offer rate, which is the higher quote).

This is not always the case, though – for example, in 2022–23 **central banks** worldwide increased interest rates to multi-decade highs to combat high and rising inflation, few high street banks passed these increases on to savers[1].

1.2.5 Interest Rates on Accounts with Variable Rates

Rates on accounts with variable interest rates generally move in line with the short-term base rate of interest, which is covered in more detail in section 5.3 of chapter 2.

Deposit-taking institutions are in competition with one another, and the interest rates set on various deposit products reflect these competitive market conditions. These rates can also reflect the institutions' credit risk profiles and concerns about stability among depositors – institutions with higher credit ratings typically offer lower rates due to perceived stability, while those with lower ratings must offer higher rates to attract deposits and compensate for the increased risk.

1.2.6 Requirement Linked Accounts

Requirement linked accounts are simply bank accounts that offer a higher-than-average headline rate of interest, but with certain conditions. These conditions often take the form of requiring a saver to retain a certain balance in a separate low-interest-earning current account with the same financial institution, or to ensure that a certain amount is paid into it, perhaps during a specified period (eg, $1,000 per month); in some cases, there may be a limit to the amount that can be paid in. The higher interest rate is often guaranteed only for a limited time (eg, one year).

In these scenarios, it is important to pay close attention to the AER, particularly when a saver has two linked accounts: one paying little or no interest (eg, a current account) and a separate linked deposit savings account paying the higher rate of interest. The requirement to hold a balance in the lower-earning account means that the overall rate of interest on the balance held across both accounts will be lower than the headline rate. Therefore, it is vital to check the terms and conditions (eg, the amount that must be held on deposit, and for how long, so they may qualify for the higher rate of interest), and to calculate the AER when considering whether this is actually a good deal.

1.3 Deposit Takers

As its name suggests, a deposit taker is an organisation whose main function is to take deposits. The principal deposit takers are banks (including challenger banks), building societies and credit unions.

Other institutions may be deposit takers. In the UK, for example, National Savings & Investments (NS&I) is one of the largest saving organisations in the country that takes deposits. The money saved and invested with NS&I is 100% secure because it is backed by the UK government. There is no overall limit on how much is guaranteed. As a government agency, NS&I is not required to be authorised by the UK regulator. NS&I is covered in more detail in section 1.8.1 of this chapter.

1 Financial Times, July 2023. UK banks lead global rivals in passing on interest rate benefits to savers. (Accessed: February 2025)

1.4 Risks

As money market products, deposits are generally regarded as low-risk assets, but they are not entirely risk-free. The risks associated with them are as follows.

1.4.1 Default Risk

Default risk (also known as credit risk) refers to the risk that a borrower or deposit taker will be unable to meet its financial obligations, such as repaying debts or honouring deposits.

Capital may be lost if the deposit taker becomes insolvent and defaults (ie, cannot repay its debts).

1.4.2 Inflation and Deflation Risk

Inflation risk is the risk that the prevailing rate of inflation exceeds the interest payable on the account, so the real rate of interest will be negative. This is the case if the account is a fixed interest account: while the cash is locked in at fixed interest rates, inflation could accelerate due to economic conditions, and the purchasing power of the capital will be eroded in real terms.

The opposite of inflation is deflation, where prices decrease. This would usually be accompanied by declines in output and demand, as falling prices can give the incentive to delay investments or purchases. In this scenario, assets that provide a good inflation hedge may be especially prone to deflation risk, while the purchasing power of deposits would increase when the prices of goods and services are lower (albeit interest rates would likely also decrease in such an environment).

Deflation should not be confused with disinflation, which is the term used for the drop in the rate of inflation.

1.4.3 Interest Rate Risk

This is the risk that the rate of interest paid on the deposit is less than could be obtained on other low-risk products, or the cash is locked in at a fixed rate for fixed terms, when the saver might otherwise have been able to take advantage of rising interest rates available in the market.

1.4.4 Operational Risk

This is the risk that the deposit taker gives poor service to the saver, and consequently the saver suffers some form of loss. For example, the deposit taker does not move the money on to a fixed-rate account when the saver has requested this.

1.4.5 Institutional Risk

In the context of cash deposits, institutional risk refers to the potential risk that a financial institution faces due to its operations or failure to manage regulatory requirements – eg, concerns about money laundering or other illegal activities. If the institution fails to properly identify and report suspicious transactions, then it could be exposed to regulatory penalties, reputational damage or legal issues.

1.5 Costs, Charges and Penalties

While many bank accounts are free of charge to open, some are subject to monthly or annual fees. This is often in exchange for a reward or additional extras (eg, breakdown cover or travel insurance). In these circumstances, savers must understand what they receive in exchange for that fee.

Fees may be charged for one of many other reasons, with the nature of the fee depending on the type of account held and the service that is being provided. Common examples include:

- **Overdraft charges** – when the saver spends more money than they have in their account, resulting in the account going overdrawn.
- **Foreign transaction fees** – the saver may be charged to use their debit card abroad or to withdraw cash in a foreign currency.
- **Automated teller machine (ATM) fees** – a fee may be incurred if the saver uses their credit card to withdraw cash from their account or if the ATM indicates that a charge will apply, for example.

For fixed-term deposits and notice accounts, a withdrawal penalty may apply if the saver withdraws their funds before the end of the stated period. The penalty can be either in the form of forfeiture of the interest or an actual monetary amount. Details as to what constitutes an early withdrawal and the penalties that apply will be provided in the terms and conditions documentation.

1.6 Regulation

The global financial crisis of 2007–08 almost saw the collapse of the world's financial system, and revealed glaring weaknesses in the business models of several major institutions. In the years that followed, the financial services sector went through a substantial regulatory reform, explicitly aimed at addressing market failures, with a particular focus on holding those in senior positions accountable for their actions.

Deposit taking is subject to supervision and scrutiny. As it is a regulated activity, financial institutions have to apply for and receive authorisation from the relevant regulator in order to be allowed to accept deposits.

1.6.1 The UK

To provide a clearer and stronger mandate for the regulation of financial services, in 2013 the former regulator, the Financial Services Authority (FSA), was converted into a 'twin-peaks' regulatory structure: the **Prudential Regulation Authority (PRA)** and the **Financial Conduct Authority (FCA)**.

The Prudential Regulation Authority (PRA)

The PRA is a part of the **Bank of England (BoE or simply 'the bank')**. It is solely responsible for the authorisation, regulation and day-to-day supervision of all firms that are subject to prudential regulation (ie, banks, building societies, insurers, credit unions and major investing firms). In addition, the BoE's Financial Policy Committee (FPC) has the responsibility and tools to maintain financial stability.

The PRA's roles are defined by two statutory objectives, namely to:

1. promote the safety and soundness of firms in the financial services sector, and
2. secure an appropriate degree of protection provided to savers, investors and policyholders.

These objectives ensure that the UK financial system maintains its stability and credibility. From a **systemic risk** mitigation perspective, it is essential for the UK economy to have a robust and stable financial system that has the ability to continue to provide critical financial services under all market conditions without recourse to the support of the UK government and taxpayers, as happened in 2009.

The PRA works alongside the FCA, which is a separate organisation and is not part of the BoE.

The Financial Conduct Authority (FCA)

The FCA is responsible for ensuring that UK financial markets operate effectively.

Its core duties include:

- protecting consumers
- promoting effective competition in their interests, and
- safeguarding the integrity of the financial system.

In addition, the FCA oversees the prudential regulation of firms not supervised by the PRA – such as asset managers and independent financial advisers (IFAs).

In 2023, the Financial Services and Markets Bill introduced new secondary objectives of growth and competitiveness for the PRA and the FCA. This has granted both regulators enhanced rule-making powers, with the overall aim of boosting the UK's competitiveness as a global financial centre post-Brexit.

1.6.2 European Union (EU)

Banks in the EU are regulated by the relevant national regulators in each member state, although supervision is coordinated at the EU level through the Single Supervisory Mechanism (SSM) for eurozone countries. For example, in Germany, banking supervision is undertaken by the Bundesbank in collaboration with the Federal Financial Supervisory Authority (BaFin); in France, by the Autorité de Contrôle Prudentiel et de Résolution (ACPR), which is part of the Banque de France; and in Italy, by the Bank of Italy.

The European Banking Authority (EBA) is an independent regulatory agency that has implemented a standard set of rules in order to regulate and supervise banks across all EU member states. Established in 2011, the EBA has the power to overrule national regulators who fail to properly regulate their banks.

1.6.3 The US

In the US, the financial regulatory system is complex, featuring a myriad of federal regulatory agencies with overlapping responsibilities for banking regulation, as a result of piecemeal changes over time in response to various historical financial crises.

In brief, many large deposit takers and systematically important financial institutions (SIFIs) are supervised and regulated by the Federal Reserve System (also known as 'the Federal Reserve' or simply 'the Fed'), which is also the US central bank. Institutions that are not members of the Federal Reserve System are primarily regulated by the Federal Deposit Insurance Corporation (FDIC). Other regulatory agencies include:

- the Office of the Comptroller of the Currency (OCC), which oversees national banks
- the Consumer Financial Protection Bureau (CFPB), which focuses on consumer protection, and
- the Financial Stability Oversight Council (FSOC), which monitors systemic risk across the financial system.

1.6.4 China

Since the 1970s, China's banking system has evolved under various reforms such that the regulatory framework today comprises three tiers.

In the top tier are three pieces of legislation enacted by the National People's Congress (NPC):

1. **The Banking Regulation Law**, which is an essential piece of China's banking legal framework. First enacted in 2003, it has been amended over the years. For example, a significant draft amendment was released in 2022, for the purpose of 'strengthening and improving modern financial regulation and raising the transparency and rule-of-law levels of financial regulation'.
2. **The Commercial Banks Law**, which regulates the behaviour of commercial banks and sets the framework for their operations and governance.
3. **The People's Bank of China (PBOC, PBoC or PBC) Law**, which defines the status and functions of the PBOC as the **central bank** detailing the businesses and activities it oversees.

The second tier consists of administrative rules and regulations enacted by the NPC and State Council , which provide additional guidance and ensure compliance with national policies and laws.

The third tier consists of more detailed prescriptive guidelines, notices and rules issued by the PBOC and the China Banking and Insurance Regulatory Commission (CBIRC). These are often updated to address specific and emerging regulatory issues in the banking and insurance sectors.

1.6.5 Japan

Japan's core banking legislation, which provides the basic regulatory framework for the banking sector, is the Banking Act (Act No. 59 of 1981), to which all banks are subject. This Act stipulates regulations relating to the scope of banking business, capital adequacy requirements, accounting and banking supervision, among other factors. The purposes of the Act are to:

- preserve the credibility of bank services in view of their public nature
- achieve sound and appropriate management of bank services to ensure protection for savers and facilitate the smooth functioning of financial services, and
- contribute to the sound development of the national economy.

The Act has been amended many times since it was first formulated in 1927 and was thoroughly revised in 1981.

1.7 Statutory Protections

Savers can determine the financial strength of banks and other deposit takers by researching their credit ratings. These are independent assessments carried out by credit rating agencies such as Fitch Group (or simply Fitch), Standard & Poor's (S&P) and Moody's Investors Service (or simply Moody's).

Credit ratings show the rating agency's opinion of the deposit taker's long-term and short-term financial standing, and how likely it will meet its liabilities to customers (among others) when they fall due.

The agencies all have their own rating systems, but they are generally quite similar. Typically, a long-term credit rating of AAA/Aaa, AA/Aa, A or BBB/Baa is regarded as very strong (called investment grade). Lower ratings of BB/Ba, B, C and below reflect progressively less strong finances (called non-investment grade, speculative, junk or high **yield**). The agencies may use a combination of capital and lower-case letters, together with pluses and minuses (eg, AA+, BBB-) or numbers (eg, Aa1, Baa3) as indications of sub-gradings within a broad sliding scale or rating band.

1.7.1 Deposit Protection Schemes

Deposit protection schemes are designed to safeguard depositors' funds in the event of a bank or deposit taker's failure. These schemes ensure that individuals and businesses are compensated for their deposits up to a certain limit, thereby providing a safety net against financial instability.

While the specifics of these schemes can vary by country, their common goal is to maintain public confidence in the banking system and protect depositors from losing their savings if a financial institution becomes insolvent. Depending on the jurisdiction, the level of protection, eligibility requirements and coverage may differ, but all schemes aim to offer a sense of security to savers.

Note that depositors with large deposits may not be fully compensated for their losses, as the compensation limit often falls below the value of those accounts. As a result, many savers choose to spread their capital across multiple banks or building societies to reduce their exposure to risk. However, this strategy often means earning lower interest rates (since smaller deposits tend to attract less favourable terms). Savers must weigh the trade-off between the security of **diversification** and the opportunity cost of potentially lower returns on their savings.

The UK

If a UK deposit taker fails, the customer will have recourse to the **Financial Services Compensation Scheme (FSCS)**. The FSCS deals with all claims against authorised firms and is an independent body set up under the **Financial Services and Markets Act (FSMA) 2000**.

- The FSCS will pay maximum compensation of £85,000 for each eligible account holder (ie, up to £170,000 for joint accounts) per authorised firm, in the event of default by a UK-regulated bank or building society.
- If multiple institutions share the same banking licence (eg, those under a banking group), the total coverage per person remains £85,000 across all institutions with that licence, not per individual institution.
- Temporary large balances of up to £1 million (eg, proceeds from a house sale) are also covered for up to six months.

The PRA is required to review the FSCS compensation limit every five years, so it is subject to change.

Deposits made by private individuals and smaller businesses are protected by the FSCS; larger businesses are generally excluded. All deposit claims will be paid in sterling, even if the deposit is held in another currency.

The FSCS does not cover deposits outside the UK, or in the Channel Islands or Isle of Man, which have their own separate compensation schemes (see below).

Eligible investors in crowdfunding and peer-to-peer (P2P) lending schemes may have recourse to the FSCS for any losses they may incur, for up to £85,000, providing they received unsuitable advice from an authorised firm on or after 6 April 2016, and the firm no longer has sufficient assets to meet a claim for compensation. That said, most P2P sales are not advised, thus sit outside the FSCS's scope. Investors therefore do not have recourse if providers become insolvent.

Additionally, cryptocurrencies (eg, Bitcoin) are not protected under the FSCS should individual investors incur losses as a result of scams, hacks or theft. Investors are therefore encouraged to ask the cryptocurrency provider if their product is protected by the FSCS before investing.

Deposit Protection Schemes in Other Countries

While the FSCS does not cover deposits outside the UK, or in the Channel Islands or the Isle of Man, this is not to say that their deposits are unprotected. Jersey, Guernsey and the Isle of Man, for example, have their own deposit protection schemes, which secure the first £50,000 per person. Typically, these schemes protect deposits regardless of the individual's or entity's residency or nationality, and irrespective of the currency in which they are held. That said, it is important to check their eligibility for compensation based on their personal circumstances and the type of account they will be depositing into before opening an account or making a deposit.

- **Europe** – the level of protection under the deposit guarantee scheme (DGS) is harmonised at €100,000, or the equivalent amount in local currency. The DGS is funded via a levy that all banks pay every year, with their individual contribution based on their risk profile, among other factors.
- **The US** – the FDIC insures deposits in US institutions of up to $250,000 per person per institution in the event that institution fails, called the US Deposit Insurance Limit.
- **China** – the PBOC covers deposits of up to CNY500,000 for each mainland bank depositor (called the China Deposit Insurance Scheme). Under the scheme, financial institutions are required to pay premiums every six months, with the rate of the premium based on their risk profile.
- **Japan** – the deposit insurance system provides protection of up to ¥10 million (plus accrued interest), per person per financial institution. This covers a range of deposits, although specific types fall outside the scope of protection.

1.8 Foreign Currency Deposits

Deposits can be held with many deposit takers in currencies other than the saver's home currency (ie, a foreign currency). Individuals may choose to hold accounts in foreign currencies for any of the following reasons:

- They have transactional needs in foreign currencies (eg, overseas income from earnings, or overseas spending needs such as on a property abroad) and wish to hold balances as a result.
- More importantly, for the purposes of this text, they may hold them for investment purposes:
  - An investor may choose to hold cash in foreign currency because the interest rates earned on that currency exceed those which they can obtain on sterling. However, they run the risk that the currency depreciates against sterling and that the additional income they earn is more than outweighed by a loss in capital value when the deposit is converted back to the home currency.
  - They may hold the foreign currency for speculative reasons (eg, they believe the currency is due to appreciate against their home currency, so they may make capital gains). They run the risk that they are wrong, though, and the currency depreciates instead.

Currency movements are notoriously difficult to predict, and the risks mentioned in section 1.4 above are not trivial. In addition, a bank holding foreign currency deposits may apply higher charges because of the greater administrative burden on it, and these may offset some of the additional returns that might otherwise be earned.

1.9 The Main Types of Deposit Account

Learning Objective

1.1.1 Understand the main types of deposit account: current; instant access; notice; fixed rate; term; money market; National Savings & Investments (NS&I) products

1.1.5 Analyse the factors to take into account when selecting between different types of cash deposits, accounts and money market funds: entry requirements

Banks, building societies and credit unions offer a wide range of account types in which savers and investors can hold their cash.

The following are some of the key account types available:

- **Current accounts** are typically used for transactional purposes and allow the holder to access their money as and when they need it. They may come with a cheque book so that the holder can access their money simply by writing a cheque; alternatively, or additionally, they may come with a debit card for the same purpose. These accounts generally earn no interest.
- **Instant access accounts** also allow the holder to get their money when they want, but do not usually provide a cheque book (or, if they do, may limit the number of times it can be used within a given period). Typically, if these accounts earn interest, it is at a variable rate.
- **Notice accounts** require that the holder gives a certain period of notice before withdrawing all or part of their deposit. If the deposit taker allows this to be waived, it may apply a penalty to compensate itself. These accounts generally earn interest at variable rates.

- **Fixed-rate accounts** earn a set rate of interest over their entire life; they are invariably for fixed terms as well. Interest is generally credited at the end of the term.
- **Term (or fixed-term) accounts** tie up deposits for a set period (eg, one month). They generally earn a fixed rate of interest, which is added to the account at the end of the term.
- **Money market accounts** are basically premium accounts, or high-interest savings accounts. They can be opened very simply at almost any financial institution, who then invests the money in such an account, usually into low-risk, short-term investments called money markets (eg, certificates of deposit (CDs) and **Treasury bills (T-bills)**), and collects the return.

  As these accounts are an investment, there are certain restrictions. Investors' money will not be as liquid as a regular savings account, and the account usually requires a minimum deposit and a minimum balance. Withdrawals are allowed, but there is a limit to how many can be made (money market accounts are not to be confused with money market funds, which are an investment strategy with larger returns than a premium savings account – see section 1.10).

The key features of these accounts are as follows:

- **How money can be paid in** – some types of deposit impose no restrictions on the amount that can be paid in. Others have maximum and minimum balances, and minimum amounts that can be added after the account is opened. This might be for commercial reasons (eg, the deposit taker is aiming at high-net-worth customers only). With most fixed-term deposits, savers cannot add a further amount once the deposit has begun; they will need to open a second, separate deposit account.
- **Withdrawals** – most providers will have rules as to when and how quickly amounts can be taken out:
  - For current or instant access accounts, the saver may be able to take money out at any time, although again there may be minimum withdrawal amounts so that the provider does not have to administer very small transactions.
  - For notice accounts, the saver must give a set amount of notice before they can take any money out, which might be anything from one week.
  - With fixed-term deposits, usually no withdrawals are permitted until the end of the fixed period. The deposit taker may agree to release the funds, but often only after deducting a substantial penalty for breaking the deposit.
- **How interest is paid** – as we saw in section 1.2, this can vary depending on the account. Interest rates may be variable or fixed at the outset, and many institutions offer tiered interest rates. Additionally, there may also be variations in, when interest is paid (eg, monthly, quarterly, or annually), with a higher rate often offered for less frequent payments.
- These factors may be important considerations for savers who rely on the interest as a source of income.

Some other considerations when selecting a cash account are:

- **Fees and charges** – some accounts may have maintenance or withdrawal fees that reduce overall returns. It is important to check for any hidden charges that could impact the return.
- **Account accessibility** – consider how easy it is to access the account and manage it online or via a mobile app, especially for savers that prefer digital banking.
- **Tax implications** – interest earned may be taxable, so understanding how taxes apply to the account is essential for accurate financial planning.
- **Customer support** – customer service must be reliable, especially when the depositor needs assistance or has questions about their account.

- **Bank stability and economic conditions** – the financial stability of the bank and the prevailing economic conditions can affect the account's returns and security.
- **Promotions or bonuses** – notably, some accounts offer introductory rates or bonuses, so it is important to understand how these incentives change over time.

1.9.1 National Savings & Investments (NS&I)

NS&I is an executive agency of the Chancellor of the Exchequer, and is accountable to HM Treasury. It provides deposit and savings products to the investing public, and in doing so, raises funds on behalf of the UK government – in other words, an investor holding an NS&I product is in essence lending to the UK government.

NS&I offers a wide range of products, from easy-access savings accounts to longer-term investments and premium bonds. As the products are underwritten by the UK government, they are regarded as effectively free from the risk of default, and there is no overall limit on how much is guaranteed. Further, as a government agency, NS&I is not required to be authorised by the UK regulator.

None of NS&I's products are subject to **capital gains tax (CGT)**, but some are subject to income tax. Listed below are its key products, further details on which are available on the NS&I website at https://www.nsandi.com/products. Note there are also some products that are not available as new, although they are still available for customers with maturing investments – these fall outside of the syllabus, so have not been included here.

Taxable	Investment Account	Direct Saver	Income Bonds	Green Savings Bond	British Savings Bond
Product Summary	Post-only savings account	Easy access savings account; managed online and by phone	Aimed at investors seeking a monthly income	Savings contribute towards green projects	Guaranteed returns for the term (growth or income)
Returns	Variable interest, paid gross	Variable interest, paid gross annually	Variable interest, paid gross monthly	Guaranteed interest rate, fixed for the term	Fixed for the term
Tax Status	Taxable	Taxable	Taxable	Taxable	Taxable in the tax year the bond matures
Investment Levels	Between £20 and £1 million per person	Between £1 and £2 million per person	Between £500 and £1 million per person	Between £100 and £100,000 per person	Between £500 and £1 million per person, per bond

Taxable	Investment Account	Direct Saver	Income Bonds	Green Savings Bond	British Savings Bond
Term	No set term	No set term	No set term	Three years	Two, three or five years
Penalties for Early Withdrawal	No withdrawal restrictions	No withdrawal restrictions	No notice and no penalty	No withdrawals allowed until end of term	No withdrawals allowed until end of term

Tax-Free	Premium Bonds	Direct ISA	Junior ISA
Product Summary	Bonds are entered into a monthly prize draw	NS&I version of the cash ISA (see chapter 5, section 6.1.1)	NS&I's version of the cash JISA (see chapter 5, section 6.2). Account holder must be aged under 18 and not have a child trust fund (CTF)
Returns	Prizes of up to £1 million, odds of winning are 22,000:1 for each £1 unit	Variable interest	Variable interest
Tax Status	All prizes are tax-free	Tax-free	Tax-free
Investment Levels	Between £25 and £50,000 per person	Up to £20,000 (2025–26)	Up to £9,000 (2025–26)
Term	No set term	No set term	No withdrawals before age 18. Transferred into an adult cash ISA at 18
Penalties for Early Withdrawal	No withdrawal restrictions	No withdrawal restrictions	

1.10 Money Market Funds

Learning Objective

1.1.3 Analyse the main characteristics, risks and returns of money market funds: cash assets only; near-cash assets; pricing, liquidity and fair value; costs, charges and penalties; constant NAV; low volatility NAV; variable NAV; accumulating NAV

1.10.1 What are Money Market Funds?

Money market funds are collective investment funds that invest in cash assets (eg, short-term bank deposits) or near-cash assets (eg, money market instruments).

Like other types of collective investment funds, investors in money market funds are shareholders in an investment pool; thus, they have a pro rata claim on this pool of investments. Money market instruments are short-term debt instruments with maturities of less than one year They are typically issued by governments and companies to fund their short-term liquidity needs. Treasury bills (T-bills) are issued by (and therefore backed by) governments. Commercial paper (CP) is the same as a T-bill, except that it is issued by large corporations instead of governments. Rather than paying interest, money market instruments typically trade at a discount to their face value; hence, investors earn a return when the instrument matures at its face value. Money market instruments are therefore generally viewed as low risk (or, in the case of T-bills as risk-free since investors run very little chance of losing their money) and highly liquid. See section 2.2.4 of this chapter for more information on T-bills.

Such pooled investments enable investors to participate in a more diverse and high-quality portfolio than they otherwise could individually. Money market funds are actively managed within rigid and transparent guidelines to offer the safety of principal, liquidity and competitive sector-related returns.

The main types of money market funds are as follows:

- **Constant net asset value (CNAV)** – units/shares in CNAV funds are issued with an unchanging face value (such as £1, €1 or $1 per share); in other words, CNAVs maintain a stable **net asset value (NAV)** regardless of market conditions. Income in the fund is accrued daily, and can either be paid out to the investor or used to purchase more units/shares in the fund at the end of each month.
- **Accumulating net asset value funds (ANAV)** – known alternatively as roll-up funds, these funds operate under the same investment guidelines as CNAV funds, in that income is accrued daily. However, unlike CNAV funds, income is not distributed; rather, it is reflected by an increase in the value of the fund units/shares.
- **Low volatility net asset value (LVNAV)** – these funds are intended to replicate some of the utility of CNAV funds, but with greater sensitivity to pricing; and extra safeguards and controls are built into the structure. Units/shares in LVNAV funds can be bought and sold at a constant price, provided that certain conditions are met – eg, the value of the assets does not deviate by more than 0.2% from its face value. LVNAV funds are authorised for a maximum of five years, at which point only the CNAV funds may exist.
- **Variable net asset value (VNAV)** – this refers to funds which use mark-to-market accounting to value some of their assets. The NAV of these funds will vary by a slight amount, due to the changing value of the assets and, in the case of an accumulating fund, by the amount of income received.

This means that a fund with an unchanging NAV is a CNAV by definition, while a fund with a NAV that varies may be an ANAV or a VNAV.

One of the main reasons that money market funds are popular with investors is their maintenance of a NAV of £1 (and so on). If the NAV rises above this level, then the manager is forced to pay out the difference as interest to investors (thus providing them with a regular flow of income) or buy more units/shares in the fund on their behalf.

Occasionally, a money market fund may fall below the £1 (and so on) NAV, known colloquially as 'breaking the buck'. This fall may be due to temporary price fluctuations in the money markets; however, if it persists, then the income provided by the fund may fail to exceed the fund's operating expenses or investment losses. For CNAVs, the chance of the fund breaking the buck is minimised as the NAV of £1 (and so on) will always be maintained.

Investors can buy units/shares in a money market fund in the same way as any other collective investment fund, with the price of the fund based on the NAV of the underlying assets. As money market funds are managed in such a way, the NAV remains constant or stable. It follows that the price at which investors can buy units/shares is also constant (although this is not fixed or guaranteed); this is in contrast to collective investment funds that invest in **equities** and bonds, and whose NAV changes daily.

To calculate the NAV, a **fund manager** must be able to value the underlying assets fairly, accurately and on an ongoing basis. For money market instruments, this can be achieved by taking the instrument's quoted price, which is based on the present value of its cashflows (see chapter 3, section 1.2).

In the absence of a quoted price for a money market instrument, one proxy for fair value is amortised cost accounting. This assumes that the instrument has been bought after issuance and held to **maturity**, and any difference between the acquisition cost and its face value is realised on a straight-line basis between those two dates. Money market funds tend to use this valuation technique as they hold assets to maturity.

1.10.2 Liquidity

Money market funds are highly liquid due to the very short maturities of the cash or near-cash assets in which they invest. Inevitably, though, some money market instruments are more liquid than others.

Treasury bills (T-bills) are the most liquid money market instruments. Commercial paper (CP) is less liquid than T-bills, although the liquidity premium (which compensates investors for investing in lower-liquidity securities) can be small as investors typically buy and hold commercial paper to maturity, so they are less concerned with liquidity.

One type of commercial paper is certificates of deposits (CDs), which are bank receipts (or certificates) confirming that a bank has received a sum of money from an investor. The bank agrees to repay this sum plus interest to the investor on a specific future date. CDs are relatively illiquid investments.

1.10.3 Fund Ratings

Money market funds have the preservation of capital as their primary objective. Liquidity and competitive, sector-related returns are other key objectives. The rating process methodically identifies, assesses and weights each fund in terms of its ability to deliver on these objectives.

The rating criteria broadly comprise four main areas of analysis that systematically address a fund's operating principles: its credit quality, portfolio construction, fund management and regular post-rating inspection. These are described in more detail below, as are the credit ratings assigned by the world's three main agencies (Fitch, S&P and Moody's).

	Sub-Indices Rating Definition	Agency Equivalent Ratings		
		Fitch Ratings	S&P	Moody's
Investment Grade	AAA	AAA	AAA	Aaa
	AA	AA– to AA+	AA– to AA+	Aa3 to Aa1
	A	A– to A+	A– to A+	A3 to A1
	BBB	BBB– to BBB+	BBB– to BBB+	Baa3 to Baa1
Non-investment grade, speculative, junk or high yield	BB	BB– to BB+	BB– to BB+	Ba3 to Ba1
	B	B– to B+	B– to B+	B3 to B1
	CCC	CCC	CCC– to CCC+	Caa3 to Caa1
	CC		CC	Ca
	C		C	
	D	D to DDD	D	C

The most secure credit rating is 'AAA' (Fitch and S&P) or 'Aaa' (Moody's), also called 'triple-A', with AA/Aa being somewhat less secure, and A being progressively less secure yet. The permutations are too numerous to set out here, but you should be aware that, for example:

- AAA/Aaa-rated debt is more secure than AA/Aa-rated debt
- A-rated debt is more secure than B-rated debt, and
- B-rated debt is more secure than C-rated debt.

Credit Quality

Credit quality is evaluated on three levels: the types of assets that the fund can buy, the entities it can engage in business with (including the exact nature of business), and the individuals or institutions that it can appoint to safeguard its assets. The rating criteria, therefore, stipulate the fund's asset range and restrictions (such as quality, type and currency), acceptable **counterparty risk** (for all transaction-based investments) and appropriate choice of custodian.

Portfolio Construction

The most complex part of analysing a money market fund is judging the fund's sensitivity to changing market conditions and, therefore, gauging a measure of its ability to shield investors from adverse market swings. All money market securities (rated or otherwise) are subject to price fluctuations – based on interest rate movements, maturity, liquidity, and the supply and demand for each type of security. Quantifying the cumulative effect of these factors is crucial to assessing overall portfolio performance.

Capital preservation is expressed in terms of the stability or constant accumulation of the fund's NAV per share. As such, both formats are scrutinised for potential deviation in the fund's market value. Determination of market value, or portfolio price exposure, starts with the examination of susceptibility to rising interest rates. A critical component of this is the fund's weighted average portfolio maturity, which is specifically restricted by rating category.

Fund Management

The rating process requires an assessment of a fund manager's operations – in common parlance, the front, middle and back offices. Key areas of interest are the fund manager's level of experience, the stated investment objectives, portfolio management techniques, risk aversion strategies, operating procedures, and internal controls including disaster recovery. Owing to the precision necessary in running a money market fund successfully, every aspect of the fund's management must be able to withstand close scrutiny and demonstrate effective, ongoing integrity of operation.

Post-Rating Inspection

Owing to the constraints of the rating criteria and the extremely low margin of error permitted at the level of fund valuation, rated money market funds are contractually obliged to supply all portfolios for periodic rating agency inspection. This is called fund surveillance. Any infringement or potential concern is communicated to the fund and timely rectification is required.

1.10.4 Benchmarks

Money market funds use different benchmarks to compare the performance of each of the funds under management, as demonstrated through short-term indicative interest rates. The main indices are:

- **Sterling Overnight Index Average (SONIA)** – launched in 1997 and under the control of the BoE since 2018, SONIA is the weighted average rate of all unsecured sterling overnight cash transactions among and between UK financial institutions. Eligible transactions are executed between midnight and 18.00 UK time, settled that same day, and are at least £25 million.
- **Euro Short-Term Rate (€STR)** – €STR, is the wholesale euro unsecured overnight borrowing costs of euro area banks. It is calculated on all transactions over €1 million that are based on borrowing transactions in euros.
- **Secured Overnight Financing Rate (SOFR)** – this is a broad measure of the cost of borrowing cash overnight, using US Treasury debt as collateral. First published by the Federal Reserve Bank of New York in 2018, SOFR is used by banks to price US dollar-denominated **derivatives** and loans. It is also used as a way to manage interest rate risk and to speculate on changes in borrowing costs.

- **Swiss Average Rate Overnight (SARON)** – SARON is the overnight interest rate of the unsecured funding market for the Swiss franc. It is based on transactions and quotes posted in the Swiss repo market.
- **Tokyo Overnight Average Rate (TONA or TONAR)** – this is the unsecured interbank overnight interest rate for the Japanese yen.

1.10.5 Costs, Charges and Penalties on Money Market Funds

Like any other **open-ended fund** (eg, **unit trusts** and **open-ended investment companies (OEICs)**), investors in a money market mutual fund have to pay the fund's expenses. Some of these expenses reduce the value of an investor's account; others are paid by the fund and reduce the NAV.

These costs can be broadly split into two categories: loads and expense ratios. On top of this, investors may also have to pay other expenses. Further details are covered in chapter 5, section 5.1.

1.11 Peer-to-Peer (P2P) Lending

Learning Objective

1.1.4 Analyse the main characteristics, risks and returns of peer-to-peer lending

1.11.1 What is P2P Lending?

The P2P lending market began in 2005 and has grown significantly since the global financial crisis, partly as a result of the low interest rates offered by high street banks and building societies, and partly due to a shift in consumer trust away from traditional banks towards alternative financial services, as many individuals did not want to leave their hard-earned cash with the institutions that they blamed for the crisis.

P2P lending involves lending money to individuals without using a financial intermediary, such as a bank. A number of independent companies have established an online presence to match lenders with borrowers in return for a fee. P2P lending differs from crowdfunding, which seeks to raise equity from investors, rather than from borrowing.

Notably, the global peer-to-peer lending market has experienced consistent growth over the past decade or so, driven by market disruption, regulatory changes, investor appetite and global economic conditions. As a result, total annual revenues are projected to reach $251.3 billion by the end of 2025 at a compound annual growth rate (CAGR) of 32.6%, and $729.1 billion by 2029 at a CAGR of 30.5%[2] .

2 The Business Research Company, January 2025. Peer-To-Peer (P2P) Lending Global Market Report 2025. Retrieved from https://www.thebusinessresearchcompany.com/report/peer-to-peer-p2p-lending-global-market-report (Accessed: February 2025)

1.11.2 Risks

One of the main risks with P2P lending is the potential for an individual to default on repayment. To mitigate this risk, the company acting as the intermediary 'underwrites' each borrower by reviewing their credit history and verifying their identity.

As some defaults are likely, the company matching lenders with borrowers seeks to reduce this risk by consolidating many smaller loans from a group of individuals into the actual loan amount required by the borrower. In this way, the failure of the borrower to maintain the loan does not have a material effect on one lender; rather, it is spread across the group that originated the total loan amount. In some cases, the maximum loan from each individual lender may be capped at 2% of the total amount required by the borrower (ie, 50 individual loans required).

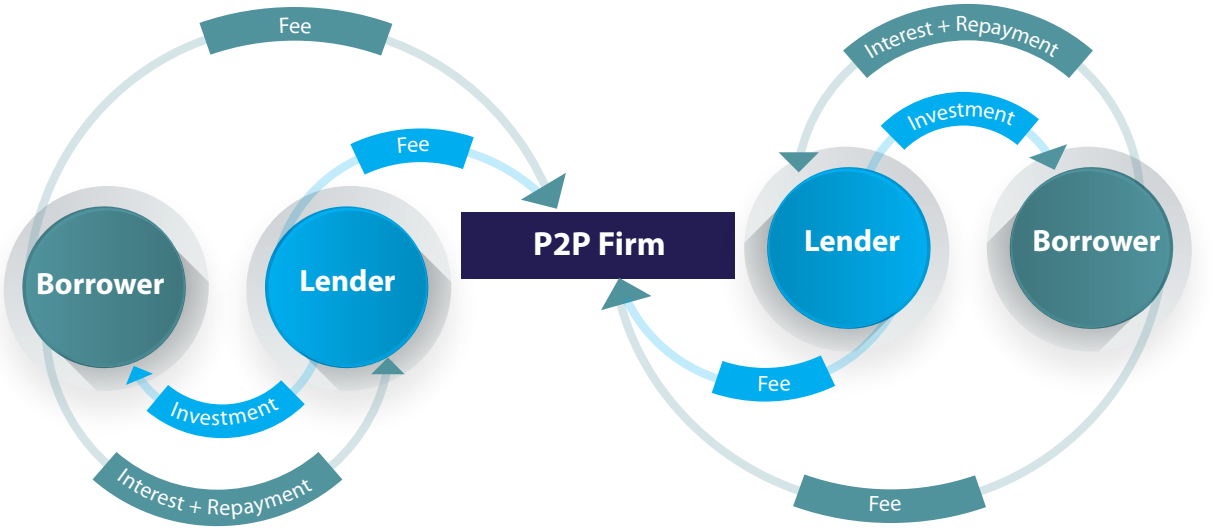
Another risk of P2P lending is illiquidity, as highlighted during the COVID-19 pandemic. As lockdowns were imposed around the world to bring the virus under control, increasingly nervous investors rushed to withdraw their funds from P2P lending platforms. Consequently, platforms froze withdrawals, leaving investors unable to access their cash for several months[3].

Over recent years, regulators worldwide have taken, and continue to take, an interest in this market, given the extent of its growth over the short term, and the increased risk that it presents to consumers. Concerns have also been raised about how these services are marketed. That said, there is remarkable divergence across regulatory regimes in global economies.

1.11.3 How does P2P Lending Work?

Potential lenders open an account with the firm offering the P2P lending services and deposit a sum of money. Borrowers apply to the same firm requesting a loan and the parties are matched. The minimum loan is generally small and most P2P lending firms have no upper limit. Payments of interest and capital are generally made by the borrower each month over an agreed term (eg, between one and five years); in this way, the lender's account balance grows over time. Although each loan is made for a fixed term, early access **options** are available if the lender requires access to capital. In practice, this involves the transfer of the loan to another lender, so there is no guarantee of short-term liquidity, and a fee is likely to be charged by the P2P firm for providing the service. It is also possible for the monthly repayments to be paid out as income to the lender.

3 The Guardian, October 2020. Peer-to-peer lending: 'I'm 19,050th in the queue to get my savings back'. Retrieved from https://www.theguardian.com/money/2020/oct/17/peer-to-peer-lending-savings-covid-pandemic (Accessed: February 2025)



1.11.4 Returns and Taxation

The returns of P2P lending are typically higher than those offered by high street lenders, reflecting the higher risk of lending directly to individuals. In fact, comparative returns can be twice as much as the equivalent high street rate. The quoted APR takes into account an assumed level of defaults, based on the experience of the P2P firm.

The interest received is paid without tax deducted at source and must, therefore, be declared in full to the tax authorities (eg, HMRC in the UK), who will calculate the liability.

In the UK, P2P ISAs (also known as innovative finance ISAs) are also available – this means that all lending interest earned is tax-free, regardless of the size of the account.

1.12 Foreign Exchange (FX)

Learning Objective

1.2.1 Understand the role, structure and main characteristics of the foreign exchange market: OTC market; quotes, spreads and exchange rate information; market participants and access to markets; volume, volatility and liquidity; risk mitigation: rollovers and stop losses; regulatory/ supervisory environment

Foreign currencies are an asset class in their own right, not merely a medium of exchange for purchasing other assets. Unlike equities or bonds, currencies are primarily traded in the foreign exchange (FX or forex) market, which is the largest segment of the global financial markets.

The FX market does not have a centralised marketplace. Instead, it operates as an over-the-counter (OTC), decentralised market comprising an international network of major banks and currency dealers, each making a market in a range of currencies in a truly internationalised environment.

1.12.1 Quotes, Spreads and Exchange Rate Information

Trading of foreign currencies is always done in pairs, called 'currency pairs'. One currency is bought and the other is sold, and the prices at which these take place make up the exchange rate. When the **exchange rate** is being quoted, the name of the currency is abbreviated to a three-letter reference, eg, UK pounds sterling is abbreviated to GBP. The most commonly quoted pairs are:

- US dollar and Japanese yen (USD/JPY)
- Euro and US dollar (EUR/USD)
- US dollar and Swiss franc (USD/CHF), and
- UK pound sterling and US dollar (GBP/USD).

When currencies are quoted, the first currency is the base currency and the second is the counter (or quote) currency. The base currency is always equal to one unit of that currency (eg, £1, $1 or €1). As the US dollar is the most traded currency in the world, it generally serves as the base currency in most quotations; primary exceptions to this rule are the UK pounds sterling, euro and the Australian dollar. It is also customary in the FX market to specify a quotation to four decimal places (in most cases, with the exception of quotations which involve the Japanese yen). For example, if the EUR:USD exchange rate is 1:1.1650, this means that €1 is worth $1.1650.

When currency pairs are quoted, a market maker or foreign exchange trader will quote a bid and **offer price**. Staying with the example of EUR/USD, the quote might be 1.1640/60. Notice that the euro is not mentioned, as standard convention is that the base currency is always one unit. If someone wants to buy €100,000, for example, then they will need to pay the higher of the two prices and deliver $116,600; if they want to sell €100,000, then they get the lower of the two prices and receive $116,400.

The difference between the bid and offer prices is known as the spread. The spread is a key indicator of liquidity and market conditions: narrower spreads typically indicate higher liquidity, and therefore more stable market conditions, while wider spreads reflect lower liquidity and potentially higher volatility or uncertainty. Note that spreads tend to be narrower in liquid currency pairs, and wider in more volatile or less traded pairs.

The world's most traded currencies include the US dollar, euro, Japanese yen, British pound, and Australian dollar.

1.12.2 Volume, Volatility and Liquidity

As an asset class, foreign currencies have unique characteristics:

- **Liquidity** – the FX market is highly liquid, with transactions occurring around the clock (24 hours a day, five days a week). This is because the FX market spans the various time zones of Asia, Europe and America, although it is not always equally active during the day. Instead, the FX market can be broken up into four major trading sessions – Sydney, Tokyo, London and New York – with the most trading activity occurring when two sessions overlap. This liquidity allows investors to enter and exit positions easily.

- **Market size** – the FX market is the largest financial market in the world, with a daily trading volume of about $7.5 trillion a day[4].
- **Global reach** – currencies reflect the economic conditions, interest rates and political stability of their respective countries, making them globally significant.

There is ample liquidity in the FX market, allowing market participants to execute trades without significant price slippage. However, volatility can vary depending on factors such as geopolitical events, economic reports and market sentiment. Currencies tied to stable economies tend to be less volatile, while those from emerging markets or regions with political instability can experience more dramatic swings.

1.12.3 Risk Mitigation: Rollovers and Stop Losses

Currency investment carries specific risks, many of which are influenced by the characteristics of the FX market itself:

- **Exchange rate risk** – exchange rate fluctuations can lead to gains or losses based on how the currency moves relative to others. For example, an investor who holds Japanese yen and anticipates appreciation may suffer if the yen depreciates unexpectedly.
- **Volatility** – currencies can be particularly volatile due to factors such as political instability, economic changes or global market events.
- **Liquidity risk** – while the FX market is typically liquid, some currency pairs may become illiquid at times. This can lead to wider bid/offer spreads and make it more difficult to execute trades at favourable prices.
- **Cost of hedging** – it may not be cost-effective or practical for the fund manager to hedge all currencies to which the fund is exposed.
- **Hedging effectiveness** – foreign currency risk can be reduced, although not completely eliminated. The effectiveness of these strategies depends on market conditions, the particular currency being hedged, and the instrument used. In some cases, the cost of implementing these strategies may outweigh the benefits, particularly in less liquid markets.

To mitigate these risks, traders use various tools, including **rollovers** and **stop losses**. A rollover refers to the practice of extending the settlement date of a foreign exchange position; typically done by swapping one currency for another, this is often used in carry trading, where traders seek to profit from interest rate differentials. On the other hand, stop losses are pre-set orders that automatically close a position when a currency reaches a certain price, thereby limiting potential losses. The implementation of such risk management tools can protect investors and traders from adverse market movements, and reduce exposure to significant financial losses.

4 Bank for International Settlements, October 2022. Triennial Central Bank Survey of Foreign Exchange and OTC Derivatives Markets Activity. Retrieved from https://www.bis.org/statistics/rpfx22.htm (Accessed: June 2025)

1.12.4 Market Participants and Access to Markets

The FX market exists to serve a variety of needs, and as such, it is composed of various participants. These participants range from large institutions to individual investors, each with different roles and motivations:

- central banks, which influence monetary policy and stabilise currencies
- commercial banks, which facilitate currency trading for clients and themselves
- companies, which use the market for hedging and cross-border transactions
- hedge funds and institutional investors, who seek to profit from currency movements, and
- retail traders (ie, individual investors who trade via brokers).

Currencies are traded directly between participants, or facilitated through banks, brokers or electronic trading platforms.

1.12.5 Regulatory and Supervisory Environment

Due to its decentralised and global nature, the FX market has been prone to foreign exchange fraud. It has also been less regulated than other financial markets, such as equities or bonds. However, there are regulatory bodies that oversee market participants, especially financial institutions and brokers – examples include the Financial Conduct Authority (FCA) in the UK, the Commodity Futures Trading Commission (CFTC) and the National Futures Association (NFA) in the US, and the European Securities and Markets Authority (ESMA) in Europe. These regulatory bodies provide oversight and govern market activities, while also ensuring transparency, reducing fraud and maintaining market integrity.

While the lack of a central exchange makes enforcement of regulations challenging, many countries impose anti-money laundering (AML) and Know Your Customer (KYC) regulations on market participants. These regulations require financial institutions and brokers to verify the identity of their clients and monitor transactions for suspicious activity, thus helping to maintain security and trust in the FX market.

2. Fixed-Income Securities

Learning Objective

1.3.1 Know the main issuing institutions and purposes for issuing fixed-income securities: sovereign states and governments; public authority; corporate; credit institutions; supranational

1.3.3 Analyse the characteristics and differences between the main types of fixed-income securities: fixed-rate bonds; floating rate notes (FRNs); zero coupon bonds; inflation-linked bonds; asset-backed securities; convertible bonds; subordinated bonds; perpetual bonds; eurobonds and foreign issuer bonds; CoCos; sukuk; green bonds; blue bonds

2.1 General Features

Also known as debt securities, bonds are fixed-income securities. They are a form of loan where an issuer (ie, a borrower), issues a debt instrument in return for funds from an investor (ie, a lender or bondholder).

The term 'bond' derives from the original use of the word: a tie or commitment (as in the saying '*my word is my bond*'). This is because a bond represents a promise to repay the capital borrowed at some defined point in the future; and also, in most cases, a certain amount of interest paid by the issuer to the lender in the intervening period.

There are several types of bonds according to the issuer:

- government bonds (also called sovereign debt)
- corporate bonds
- supranational bonds
- public authorities bonds
- mortgage-backed securities (MBSs) and other asset-backed bonds (ABSs).

Within these bonds are various sub-categorisations – for example, investment grade and high yield, and domestic and foreign currency issues.

Investment Grade and High Yield Bonds

Generally, a bond with a long-term credit rating of BBB (Fitch, S&P) or Baa (Moody's) and above are considered worthy of investment grade. High-yield (also called speculative or junk) bonds are those which are regarded as being below investment grade – that is, their issuer has a credit rating of BB/Ba or below. See section 1.10.3 of this chapter for further details on credit ratings.

For high-yield bonds, there is a higher probability of their defaulting on either the interest payments or the capital repayment. Because of this, they tend to trade at lower prices and offer higher **coupons** (ie, higher default premiums) compared to more secure debt issues to compensate investors for assuming this default risk. In turn, as their name suggests, their yields (assuming the interest payments can be kept up) are significantly greater than comparable maturity bonds with higher credit ratings.

Greece's credit rating migration in the aftermath of the global financial crisis is a good example of a solid credit-rated sovereign issuer that has seen its credit status dramatically lowered to speculative debt. In 2007, Greek sovereign debt was rated by Moody's as A1 (upper-medium grade)[5], thus Greece was deemed to have low credit risk. At the same time, Germany was rated at Aaa[6], with minimal credit risk. As Greece's inability to meet its debt obligations increased, its rating was downgraded and, by 2012, it stood at C (the lowest rating awarded by Moody's). The spread between Greek and German government bonds widened as a result, from 0.36% to a peak of about 24% in 2015[7,8] – this reflected the fact that investors deemed Greek debt as a very high risk compared with German bonds, for which they demanded adequate compensation (through a higher yield spread).

It is worth noting that spreads continuously expand and contract as underlying economies and financial markets change over time.

5 Trading Economics, 2025. Greece – Credit Rating. Retrieved from https://tradingeconomics.com/greece/rating (Accessed: February 2025)
6 Trading Economics, 2025. Germany – Credit Rating. Retrieved from https://tradingeconomics.com/germany/rating (Accessed: February 2025)
7 World Government Bonds, February 2025. Greece 10 Years Bond – Historical Data. Retrieved from http://www.worldgovernmentbonds.com/bond-historical-data/greece/10-years/ (Accessed: February 2025)
8 World Government Bonds, February 2025. Germany 10 Years Bond – Historical Data. Retrieved from http://www.worldgovernmentbonds.com/bond-historical-data/germany/10-years/ (Accessed: February 2025)

Domestic and Foreign Currency Bonds

Further, bonds can be either domestic or foreign currency bonds. In terms of currencies, there are broadly three classifications of bonds that may be issued by governments or corporates: foreign bonds, **eurobonds** and global bonds.

Domestic Bonds	Foreign Bonds
• A bond in which the nationality of the issuer, the denomination of the bond and the country of issue are the same. • For example, a Japanese yen-denominated bond issued in Japan by a Japanese company).	• Issued in a domestic market by a foreign entity, in the domestic market's currency. • For example, a bond issued by a US company in Canada, in Canadian dollars. • Often, foreign bonds bear names that reflect the country in which they are issued, eg, bulldogs in the UK, yankees in the US, and dragons in China.

Eurobonds	Global Bonds
• Denominated in a currency other than the home currency of the country or market in which the bond is issued. • Contrary to the name, eurobonds do not have anything to do with the euro currency, nor do they have to be denominated in euros. Rather, they can be issued in any major currency. • For example, a bond denominated in Chinese renminbi in the UK. This means that eurobonds can be held by investors in almost any country.	• Also called international bonds. • Sometimes referred to as eurobonds. While there are similarities between them, global bonds can also be traded and issued simultaneously in the country whose currency they are issued in. • Continuing with our eurobond example, a global bond could be denominated in Chinese renminbi, and be offered in both the UK and China.

There are several general characteristics that any bond (regardless of issuer, credit rating, the currency in which it is denominated, and so on) is likely to share, which we will now consider.

2.1.1 Nominal Value

All bonds are issued with a fixed principal amount or **nominal value (NV)** (also known as face value or par value), which remains with the bond for its life. For example, the nominal value is normally £100 on UK bonds, $1,000 on US bonds, and CNY100 in China. The nominal value facilitates the calculation of yields (ie, the coupon payment as a percentage of the nominal value), enabling the calculation of the net present value (NPV) of the cash flows and redemption proceeds.

2.1.2 Price

The bond price is quoted in terms of the amount that an investor would have to pay in order to buy the nominal value of the bond in the secondary market from a seller. In the UK, the price is quoted in pounds and pence (decimal terms), in the US in dollars and cents, and so on.

Compared to its fixed par value, the price may be trading above par (at a premium) or below par (at a discount). The market price is based on the market's assessment of the fair value and is set by the supply and demand for the paper in the marketplace. The cash flows that an investor will receive from the bond are capitalised with the market's expectations about the future pattern of interest rates. These rates are referred to as the term structure of the bond.

The quoted price is called the **clean price** and this excludes the accrued interest that is due to the seller of the bond. The **dirty price** of the same bond is the total price payable by the buyer and is the clean price plus the accrued interest.

2.1.3 Maturity Date

The maturity date is when the nominal value of most bonds is repaid by the issuer. Prior to that date (and to the **redemption** of the principal), it can be traded on a secondary market.

Most bonds redeem on a single date, called a bullet redemption. To give an example, the UK government's Treasury Gilt 1.125% 22/10/2073 matures on 22 October 2073, on which date the final coupon payment and the whole par value will be paid to the investor.

Occasionally, the issuer may be given the right to repay the bond at an earlier date (known as callable bonds), or they give holders the right to sell their bonds back to the issuer prior to maturity (known as puttable bonds).

Some callable bonds are a double-dated bonds, which are issued with two maturity dates. The issuer can give notice and choose to redeem the bond on any day between the first and final maturity dates – this decision will be based on whether to redeem the bond based on what interest rates are doing in the market at the time: if the bond represents relatively cheap borrowing, it will likely let the bond run for as long as it can, but if it can replace it with cheaper new borrowings, it will probably repay it as early as is possible. For example, the UK government has previously issued double-dated gilts, the last of which – 12% Exchequer Stock 2013–17 – they could choose to redeem on any day between 12 December 2013 and 12 December 2017.

Bonds are classified in terms of how long they have to run before they are redeemed (ie, before the issuer repays the capital). In the UK, there are two different conventions used:

	Financial Times	DMO
Shorts	Under five years to run to redemption	Under seven years to run to redemption
Mediums	Five to 15 years to redemption	Seven to 15 years to redemption
Longs	Over 15 years to redemption	Over 15 years to redemption

The *Financial Times* (FT) method is probably more familiar to retail investors who use the FT to follow prices, while the Debt Management Office (DMO) classification is used by professionals.

Other countries and organisations may have their own classifications.

Over time, longs eventually become mediums and then shorts, as maturity nears. In more recent years, some governments and companies have issued bonds with maturities of 50 and even 100 years (with the latter often referred to as century bonds, although they are relatively rare). Even longer bonds exist: in 1883, for example, Canadian Pacific Corporation issued a 4% 1,000-year bond maturing in 2883; due to its extremely long maturity period, it is often referred to as a perpetual bond. These 'ultra-long' issues are categorised along with the 'longs' as they do not have a separate category. Similarly, 'ultra-short' issues (ie, those maturing within one year) are categorised with the 'shorts'. For double-dated bonds, the later date is used for the categorisation.

Other bonds are perpetual (ie, there is no maturity date); these are also called irredeemable bonds or undated bonds. The issuer is under no obligation to redeem the principal sum, thus the coupon is paid into perpetuity; however, they may have the right to do so if they wish.

Bonds are generally not redeemable before their final maturity date (ie, investors cannot demand early repayment from the issuer), but they can still be traded on secondary markets.

2.1.4 Coupon

The coupon is the amount of interest that an investor will earn each year on the nominal value (NV) of a bond. The NV is effectively the original amount borrowed by the issuer, and it is generally market convention to talk about bonds in terms of £100, $1,000, and €100 (or otherwise) NV when calculating the return on the investment on their price. How often the coupon is paid is determined at issue – the frequency is typically every quarter, six months or once each year.

The vast majority of bonds are issued with a predetermined, fixed value for the coupon; hence they are known as 'fixed-interest' or 'fixed-rate' securities. However, some pay coupons that fluctuate in line with a broader index.

The investor's income tax liability on the coupons will depend on their other sources of income and the availability of any statutory allowances in their country (or countries) of residence. In the UK, for example, coupons are classed as savings income. In other words, if the income received falls within an individual's **personal savings allowance (PSA)**, then there is no further tax to pay; otherwise, it will be taxed at their marginal rate (see chapter 4, section 1.2).

Tax is not normally deducted from the coupon payment, and this is referred as to being a gross coupon. That said, investors may be able to choose to have income tax deducted from the payment of their coupon, which is referred to as *'electing for withholding tax to be deducted'*.

For example, in the UK, if an individual holds £100 NV of a 6.5% semi-annual bond and elects to have tax deducted (which would be at the basic rate of 20%), their next coupon will be reduced to 80%, as follows:

$$\text{Next coupon} = £100\text{NV} \times \text{coupon rate} \times {}^{6}\!/_{12} \times 80\%$$

$$= £100 \times 6.5\% \times 6/12 \times 80\% = £2.60$$

Thus, the gross coupon is £3.25 (ie, half of £6.50) and the net coupon is £2.60.

Floating Rate Notes (FRNs)

At times, these fluctuations are in relation to a given measure of interest rate, called **floating rate notes (FRNs)** or floaters. Here, the coupon for the FRN is tied to a short-term market-rate of interest, (eg, SONIA, €STR or SOFR) that is adjusted regularly (eg, at one- to six-monthly intervals). Thus, FRNs are popular during periods of increased volatility in interest rates, when lenders are reluctant to lend funds cheaply at a fixed period for a fixed rate.

The coupon on FRNs consists of two parts, namely:

1. the reference or index rate, and
2. a quoted margin (ie, the rate above the reference of index rate that must be paid) which is defined at the outset and indicates the borrower's credit ratings and size of the issue, in addition to the market conditions at that point.

An example of this is a five-year bond with a coupon of a benchmark rate (the index rate) plus 25 basis points (the quoted margin). A basis point is equal to 0.01%, so 25 bps would be equal to 0.25%. If the benchmark rate is 6% per annum over a six-month period (it is usually worked out as an average), then the FRN will pay 6% pa plus the 0.25% spread, or 6.25% pa in total over the period.

Other conditions may be included, such as an interest rate becoming fixed if it falls to a specified level, known as a drop lock. It is also possible for the issuer to protect the FRN with a ceiling or a cap on the rate so that if interest rates rise, the coupon also rises, but not beyond the ceiling. A collared FRN with a floor and a ceiling is known as a mini-max bond.

Inflation-Linked Bonds (ILBs)

At other times, these fluctuations may be in relation to a particular measure of inflation, called inflation-linked bonds (ILBs); also called index-linked bonds or linkers. Here, interest payments – and, indeed, the capital repayment at maturity – vary in accordance with changes in inflation rates, such as the **retail price index (RPI)** or the **consumer price index (CPI).** Thus, ILBs provide a degree of protection against inflation, which can dramatically erode the nominal value of, and income provided by, conventional bonds. It follows that the **gross redemption yield (GRY)** of an ILB can be considered to be the real yield, in contrast to a nominal yield from a conventional bond. Inflation indices are covered in more detail in section 4.3 of chapter 2.

Zero Coupon Bonds (ZCBs)

There is also a variety of bond known as **zero coupon bonds (ZCBs)**, or simply 'zeros', which pay no coupon. Instead, the investor makes their return by virtue of the fact that the bond is issued at a price well below its eventual redemption price (the latter usually being its face value). For example, a ZCB may be issued at £60 per £100 nominal, with an eventual redemption price at £100 per £100 nominal. This capital appreciation reflects the return on holding the bond.

On the face of it, the return looks more like a capital gain than an income stream. However, in most cases, tax authorities will deem the investor to have received a notional amount of income each year and tax them on that, in order to avoid the possibility of investors abusing zeros as a way of obtaining the certainty of return of a fixed-interest instrument, without the income tax liabilities.

ZCBs have some intriguing properties that are much valued by pension funds and risk managers who use them to get more effective immunisation against interest rate risks, especially in asset/liability management (ALM) applications. The **duration** of a zero is the same as its maturity.

Convertible Bonds

A **convertible bond** is a type of bond that can be converted into other securities of the issuer. The majority of convertible bonds are issued by companies, allowing investors to convert the bond into a predetermined number of the company's shares; thus, convertible bonds provide a way for companies to raise capital while offering holders the potential for equity upside if the company's stock performs well. Governments can also issue convertible bonds, but they are generally convertible into other bonds issued by that government; convertible government bonds are relatively rare, with most government debt issued in other forms.

2.1.5 Security and Ranking

The promise given by a bond issuer to pay coupon interest and the final principal on loaned amount, together with rights of the investor, are set out in a written agreement between the issuer and the investor. It includes the coupon rate, period to maturity, and whether the bond comes with any special features such as convertibility or whether it is callable. All bonds must have an indenture and the terms of this are detailed in a bond's prospectus.

If a company which has issued debt goes into liquidation, then any bonds it has issued are ranked in order of seniority. This ranking determines the order in which they will be repaid, with those ranking last being at greatest risk of there not being enough money to go round. The ranking will depend on whether the bond is:

- Secured or unsecured:
  - **Secured debt** involves the identification of certain of the issuer's assets, so that, if the issuer defaults, the investors will have a prior legal claim over that asset.
  - **Unsecured debt** leaves the investor with no certainty as to the payment of interest or repayment of capital, excepting for the issuer's promise to repay.

- Described as subordinated or unsubordinated:
  - **Unsubordinated bonds** (also sometimes described as senior debt) carry an unconditional promise that they will be repaid before the creditor's other obligations.
  - **Subordinated bonds** (sometimes known as junior debt) rank after unsubordinated bonds for repayment. An investor in subordinated bonds can find themselves junior in a capital structure by subsequent new issues, after the bond has been issued and depending on the terms of the respective covenants.

Invariably, bonds are issued with covenants. Covenants are simply conditions that provide some form of protection for the bondholder. Common covenants include those limiting further debt and its priority for repayment, those restricting the payment of **dividends** and those restricting the sale of assets.

To help us become more familiar with some of the concepts associated with bonds, we will now examine some of the most common types.

2.2 Government Bonds

Governments are regular issuers of bonds; it is one of the keyways in which they raise money to pay for their day-to-day operations or to finance projects such as infrastructure. Government bonds dominate the bond markets, with modern governments running a budget deficit which leads to large-scale issues of bonds. Sometimes, the secondary market is run on stock exchanges (eg, France, Germany and the UK) and sometimes outside stock exchanges (eg, the US).

2.2.1 UK Government Bonds

In the UK, the DMO issues bonds on behalf of HM Treasury. Their name – gilt-edged stocks, or gilts for short – derives from the fact that, originally, the certificates representing such investments were printed on paper with gold (gilded, or gilt) edging, something which was intended to represent the high level of safety associated with the government. Even today, the term 'gilt-edged' is used to describe something perceived as a very safe investment or opportunity.

Once issued, gilts can be bought and sold on the stock market, via the government DMO's purchase and sale service (for private investors who are members of the DMO's Approved Group of Investors) or through a gilt-edged market maker (GEMM).

Net Cash Requirement (NCR)

The UK government uses the money raised via gilts to finance its debt burden, known as the central government net cash requirement (CGNCR). The CGNCR represents the shortfall between:

- the central government's revenues (what money it takes in, in the form of taxes and duties), and
- what it spends on running the country (eg, paying state benefits, and infrastructure projects, such as road building).

As such, it is a component of the **public sector net cash requirement (PSNCR)**, which is the amount borrowed annually by the UK. It is equal to the sum of:

- the central government net cash requirement (CGNCR)
- the local government net cash requirement (LGNCR), and
- the public corporations net cash requirement (PCNCR).

Gilts are used to fund only the CGNCR. Local governments and various public corporations can often issue bonds themselves to fund the LGNCR and PCNCR respectively (eg, local authority bonds – see section 2.2.2 of this chapter).

In other words, the PSNCR is the total shortfall for central government, local authorities, and public corporations, hence it is also referred to as the budget deficit. The PSNCR should not be confused with the national debt (ie, the total amount outstanding that is owed by the UK government; effectively, a sum of all PSNCRs borrowed over successive years to date).

Debt-to-GDP

To provide perspectives in terms of scale, note that we often specify this debt as a proportion of the UK **gross domestic product (GDP)** or debt-to-GDP. In modern history, there has only been one major episode when debt exploded above 200% of GDP levels: an all-time high of 240% in 1947, as the UK government sought to rebuild the economy after World War II via a $3.75 billion loan from the US and a further loan from Canada[9]. Debt-to-GDP fell in the years that followed, reaching a record low of 21.7% in 1990. It rose above 50% once more during the global financial crisis; and surged once more during the COVID-19 pandemic, peaking at 107.6% in Q1 2021[10], as government spending increased (eg, furlough schemes) while tax revenue (eg, income tax and VAT) dropped due to business closures, reduced consumer spending, and widespread job losses.

In monetary terms, according to official data, UK government debt currently stands at an all-time high of £2.8 trillion[11], which is equivalent to nearly 100% of GDP.

This is an important consideration when assessing a government's financial health, since rising debt levels result in higher interest payments, which may reduce funds available for public services and investment. While some argue that borrowing can stimulate economic growth, others fear that the long-term costs could strain an economy, especially when that economy has an ageing population and reduced tax revenue.

Types and Classifications of Gilts

Most gilts are issued with the name 'Treasury', unless they have some other name reflecting their investment features (eg, conversion). There is a wide range of coupons and redemption dates from which investors can choose.

9 GOV.UK, December 2020. What's the Context? Signing the Anglo-American Financial Agreement, 6 December 1945. Retrieved from https://history.blog.gov.uk/2020/12/07/whats-the-context-signing-the-anglo-american-financial-agreement-6-december-1945/ (Accessed: February 2025)

10 ONS, June 2022. UK government debt and deficit. Retrieved from https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicspending/bulletins/ukgovernmentdebtanddeficitforeurostatmaast/june2022 (Accessed: February 2025)

11 Office for Budget Responsibility, January 2025. Data. Retrieved from https://obr.uk/data/ (Accessed: February 2025)

This wide choice, coupled with the fact that gilts are regarded as very safe, has made them popular investments with both private and institutional investors (eg, pension funds, insurance companies and fund managers). It is worth noting, however, that the gilt market experienced significant volatility in 2022, driven by rising inflation and higher interest rates; this culminated in a dramatic sell-off following the UK government's 'mini-budget' under Prime Minister Liz Truss. This highlights that gilts are not entirely free from market risk, especially in times of economic or political uncertainty.

Gilts are usually repayable by the government (ie, the capital is paid back to the holder of the gilt at the time, and the loan ceases) on their maturity or redemption date. The redemption date may be fixed, double-dated or undated, although only fixed maturity gilts are in issue at this time. Further, the redemption date can range from days to decades (currently, the longest maturity is 2073). Over the years, the DMO has maintained its interest in issuing longer-dated gilts to ensure that this area of the **yield curve** remains liquid for investors seeking a security with such maturity and duration.

Conventional gilts make up a large share of the outstanding gilt issues, along with some that are index-linked[12]. There are no floating rate gilts in issue at this time.

Interest on most types of gilts is paid out every six months, although the coupons are paid quarterly in some cases.

Other gilt types include the following:

- **Inflation-linked gilts (index-linked gilts, linkers or ILGs)** – interest payments (and, indeed, the capital repayment at maturity) vary in accordance with changes in inflation rates, as measured by the RPI.

  While ILGs (like conventional gilts) are regarded as low-risk instruments, investors need to remember that RPI can go down as well as up, so their income payments from an ILG can fall as well as rise. Additionally, there is no deflation 'floor' for ILGs – ie, their final redemption payment could be less than £100 per £100 nominal, if prices in the UK generally fall.

  Since each interest payment is adjusted upwards to reflect the change in the RPI since the gilt was issued, the coupon quoted for an ILG is much lower than is the case with a conventional gilt (typically of the order of 0.125% to 5%). Therefore, the total payment will, almost always, be greater than the nominal coupon, unless the reference index is flat or falls.

  For the purposes of calculating interest and capital payments on ILGs, the government measures the RPI with a three-month indexation lag (ie, three months between the interest payment and the RPI on which it is based). For ILGs issued prior to September 2005, an eight-month lag applies. Thus, the amount of capital that the investor will get back on redemption will depend on what inflation does up until three or eight months before redemption.

  The UK government is in the process of amending the way in which the RPI is calculated, so it will align more closely with the CPI including housing costs (CPIH). This change, which is set to be implemented by 2030, will likely result in a fall in the value of **index-linked gilts (ILGs)** as they will be linked to a lower inflation measure.
- **Floating rate gilts** – these gilts are unusual in that they pay variable coupons, and pay four times a year instead of semi-annually. There are currently no floating rate gilts in issue.

12 United Kingdom Debt Management Office. Gilt Market: Gilts in Issue. Retrieved from https://www.dmo.gov.uk/data/gilt-market/gilts-in-issue/ (Accessed: February 2025)

- **Convertible gilts** – the owner has the right to convert the gilt into predefined amounts of a different gilt at some time in the future. Convertibles are usually short- to medium-term bonds which may be converted into a longer issue at the discretion of the investor. In the *Financial Times*, for example, they are identifiable by the abbreviation 'Conv' in the title.

2.2.2 UK Local Authority Bonds

These are loan stocks issued by UK local authorities; they are often referred to collectively, especially by those dealing in them on the LSE, as corporation stocks.

Local authority bonds are usually secured by a charge over the assets of the issuing authority – that is, if the local authority cannot repay the interest or capital of the loan as it falls due, from the cash it has available at the time, then those assets can be sold to raise the money, thus, securing the borrower's position.

Local authority bonds used to be guaranteed by the Public Works Loans Board (PWLB), giving them extra safety, prior to the PWLB's abolition in 2020. The PWLB's functions for lending to local authorities have been transferred to the Treasury, with operational responsibility delegated to the DMO, under powers in the Public Bodies Act 2011.

Local authorities are responsible for making their own borrowing decisions under the prudential regime. While local authorities might seem pretty sound, it is not unheard of for a local authority to go broke. Investing in local authority issues is not quite as safe as investing in gilts because the local authorities themselves are separate from central government and the issue may or may not be guaranteed.

Local authority bonds are divided into two types:

- **Local authority fixed stocks** – these fixed-rate investments are not marketable (ie, once an investor has bought a holding in the initial issue of stock, they cannot sell it on in the market). Thus, investors must hold stocks until maturity unless the local authority is willing to redeem early, and they pay a penalty charge.
- **Local authority negotiable loans (yearlings)** – also often issued by local authorities. They have a life of no longer than two years, are issued at par, and are marketable.

2.2.3 Foreign Government Bonds

Government bonds (often referred to as 'govies, pronounced 'guv-ees') are typically considered risk-free because sovereign governments can, in theory, raise taxes or increase the money supply to meet their debt obligations at maturity. That said, it is not unheard of for governments to default on their debts – eg, Argentina has defaulted on its debt nine times in its history, the last of which occurred in 2020. The general features of government bonds and the markets they trade in vary between countries.

For example:

- **Issuing entity** – Bonds may be issued by the country's central bank (eg, the US, Germany or France), by the Ministry of Finance (the Netherlands, China, Japan), or by the specific DMO on behalf of the government (the UK, Ireland, Sweden, Portugal and New Zealand).
- **Issuance method** – The issue may be to specialist dealers (eg, the US, UK, France, Germany or Italy) or to syndicates of banks (Switzerland).
- **Form of ownership** – Bonds may be in registered form (ownership is officially recorded in a register maintained by the issuer – eg, the US or UK) or bearer (anonymous, with no register of holders – eg some European, Central and South American countries). Notably, governments are generally cracking down on bearer bonds due to security issues (eg, tax evasion).
- **Interest payment frequency** – Some markets pay interest semi-annually (the US, UK, Italy or Japan), while others pay once per year (France, Germany, the Netherlands, Spain or Belgium).
- **Price quotation** – Bond prices may be quoted in fractions (the US, eg, down to 1/32) or decimals (rest of the world).

Several governments worldwide offer ILBs including Australia, Canada, France, Iceland, India, Israel, New Zealand, Sweden and the US. Of these, the largest component of the global ILB market is US Treasury inflation-protected securities (TIPS). Unlike ILGs, some overseas ILBs (eg, the US) offer a deflation floor – this ensures that investors receive the NV of the bond at maturity, even if the bond's principal has fallen below its NV due to deflation.

Many governments also issue bonds in their domestic markets. Examples of government bonds and the names by which they are often known are set out below.

US and Canada

The US and Canada have registered Treasury notes (T-notes) with a maturity of one to ten years, and Treasury bonds (or T-bonds for short) with a maturity of over ten years. Both are regularly sold by **auction** (eg, T-bonds and ten-year T-notes are sold quarterly, and all others monthly).

Germany

Germany has:

- bearer *Bunds* with maturities of between ten and 30 years
- medium-term notes such as *Bobls (an acronym for bundesobligationen)* for between three to five years, and
- *Schatz* with maturities of two years.

Most German government bonds are fixed-rate, although there is the occasional floating rate bond. All are issued by the Bundesbank.

France

France has two types of government bonds available, which are:

- bearer **Obligations Assimilables du Trésor** (OATs), with maturities of two to 50 years and which are sold on a regular monthly auction basis and short-term T-bills, and
- **Bons du Trésor à Taux Fixe** (BTFs) with maturities of up to 12 months.

While the French government has previously issued other types of debt, including FRBs and ZCBs, none have been in issue since 2013 following a rationalisation of the structure of government debt.

Japan

Japan has Japanese government bonds (JGBs) which are usually issued with maturities of ten years, although maturities of 20 years may be available through a super-long bond, and they are sold by the Ministry of Finance.

Consideration for UK Investors

For UK investors, it is important to note that government bonds issued in currencies other than sterling may have tax implications. Specifically, such bonds are subject to capital gains tax (CGT) on any gains made, as profits can arise not only from changes in bond prices but also from fluctuations in the value of the foreign currency. Investors should be aware of this additional layer of risk when investing in foreign-denominated government bonds. Additionally, any income or gains received in a foreign currency will be subject to foreign exchange (FX) risk when converted back into sterling, which could potentially affect overall returns. In contrast, UK gilts are exempt from CGT, but losses on gilts cannot be used to offset other capital gains.

2.2.4 Treasury Bills (T-bills)

Treasury bills (T-bills) is the name given to short-term government debt instruments, issued to manage the government's cash flow. They are an example of zero coupon debt securities (see section 2.1.4) and pay no interest; instead, they are issued at a discount to their face value and redeemed at par. The investor receives their return by way of the increase in price between the issue price and the eventual redemption price.

This does not mean, however, that an investor cannot lose money if they decide to sell their T-bill before its maturity date: the price of T-bills fluctuates in the market, as with any tradeable instrument, and could fall to below what they bought it at before rising again to par at maturity.

In the UK, T-bills are issued by the UK government through the DMO, as part of its work in managing the UK government's funding and cash management. UK T-bills can be issued with maturities of one month (approximately 28 days), three months (91 days) or six months (182 days). In theory, they can also be issued with maturities of 12 months (up to 364 days); although no 12-month tenders have been held to date. Members of the public wishing to purchase UK T-bills at the tenders must do so through a primary participant and purchase a minimum of £500,000 nominal.

US T-bills are widely considered to be the lowest-risk investment available in the market, as they are fully backed by the security of the US government. Common maturities are four, eight, 13, 26 and 52 weeks – on average, the longer the maturity date, the higher the rate of interest on offer to the investor. US T-bills are usually sold in denominations of $1,000, although some can reach a maximum denomination of $5 million in non-competitive bids.

As the UK and US governments are unlikely to go bankrupt, T-bills issued by those governments are often used as a proxy for the risk-free rate when pricing other securities or in calculating risk premiums – see chapter 3, section 2.1.

Other governments also issue T-bills, such as Sri Lanka, India and Japan, often in their local currencies and occasionally in foreign currencies (eg, US dollars) to appeal to international investors.

2.3 Corporate Bonds

Corporate (company) loan stock, or corporate bonds, are issued by companies. They may or may not be backed up with security taken over a specific asset owned by the issuing company. Very large corporates may find it easier to issue bonds as eurobonds rather than as domestic bonds.

Interest is paid gross, at specific intervals which will be set out in the bond's terms (eg, usually half years for UK corporate loans). In the UK, as with gilts, CGT is not chargeable, providing that it is a qualifying corporate bond (QCB). Broadly, a QCB is one which is interest-paying, rather than a convertible; and is denominated in sterling.

Some bond issues carry guarantees with them, (ie, the issuing company's parent, or occasionally some other third party, is undertaking to repay the capital and interest if the issuer cannot itself meet the repayments).

Corporate bonds may be debentures or convertibles:

- Most corporate bonds are issued as debentures. The term debenture can vary in its legal and financial implications from one country to another, as well as in the terms of the issuance:
  - In some countries, it denotes debt instruments when the issuer's obligations are backed by specific assets (such as land or buildings) – such securities are referred to as secured debentures. If the issuer goes into liquidation, these assets must be sold to pay investors. As secured debentures are more secure, the rate of interest is lower.
  - In other countries, however, no security is provided, in which case the stock is referred to as an unsecured loan stock (ULS) or unsecured notes. In these circumstances, lenders rely solely on the issuer's creditworthiness. As a result, the interest rate is higher.
  - In the UK, for example, debentures can be either secured or unsecured, depending on the terms. It is important, therefore, for lenders to carefully review the terms before committing to any investment.
- A **convertible** is a bond which is converted later, either into another type of bond (for example, convertible gilts, see section 2.2.1) or into equity. The difference between the implied conversion price of the equity and the market price is called the premium.

There is also a hybrid type of instrument, the **preference share** or participation stock, which are equity securities that pay debt-like returns.

2.3.1 Permanent Interest-Bearing Shares (PIBS)

PIBS are issued by building societies. As with other interest-bearing securities, they meet the needs of many investors who seek income; they offer a higher return than many global government bonds, but also carry a higher risk.

PIBS have the following features:

- Interest is paid gross at a fixed rate, half-yearly and is taxable. Tax is collected through the investor's Self-Assessment tax return.
- Building societies are under no obligation to pay the interest in any one year, nor to roll it over to the next year (ie, the shares are non-cumulative). This could happen in times of severe financial pressure.
- As with all fixed-interest securities, if interest rates rise, the prices of PIBS will fall.
- PIBS are irredeemable. They are only repaid by an issuing building society on liquidation, in which case the PIBS holders will be the last creditors to be repaid.
- Investors do not pay CGT on disposal, as the shares are classified as QCBs.
- PIBS are traded on the stock market and can be traded through a stockbroker. They can only be traded in round amounts varying from 1,000 to 50,000 shares.
- PIBS are fairly illiquid, so are difficult to trade. This can lead to relatively large spreads (ie, the difference between buying and selling prices), adding to transaction costs.
- PIBS holders are members of the building society and will normally qualify for distributions on demutualisation.

If a building society demutualises, PIBS are automatically converted into perpetual subordinated bonds (PSBs). Similarly to PIBS, interest on PSBs is gross and is taxable; they are fairly illiquid. However, PSBs rank lower in the order of payment than other loans if the issuer defaults.

2.3.2 Convertible Loan Stocks/Convertible Bonds

As well as the straight corporate bonds we looked at above, corporate issuers may also issue convertible loan stocks. For much of their lives, these behave like ordinary loan stocks, but have the potential to be converted into shares instead.

The main features of convertibles are:

- The loan stock itself generally carries a fixed-interest coupon.
- The stock's terms include the right for stockholders to convert their holding into a predetermined number of ordinary shares on or between set dates in the future.
- The conversion terms are usually expressed in such a way that a set number of shares will be received in return for each £100, $1,000, €100 (and so on) nominal of loan stock converted.
- The conversion period may be on a set date, or a series of set dates, or between certain dates: there will usually be an expiry date, after which the stock cannot be converted. If the stock has not been converted, it then reverts to behaving like an ordinary loan stock (a straight loan stock), with the same coupon and maturity dates as were originally attached to it.
- Usually, convertibles are first made available to existing shareholders to give them the opportunity to avoid the dilution of their existing stake in the company.

- The conversion price (ie, the effective price of the shares to an investor who acquires them by exercising their conversion option instead of buying them in the market) can be calculated by dividing the current market price per £100 (or other currency equivalent) nominal, by the number of shares that can be acquired for that nominal. If the conversion price is lower than the current market price at the exercise date, it will make financial sense to exercise it.

Companies issue convertibles for a number of reasons:

- Convertibles are attractive to many investors because they combine the certainty of predictable income streams of a loan stock with the potential for growth that shares offer.
- Because of their appeal, a company issuing a convertible (instead of a straight bond) may have a better chance of raising capital than it otherwise would.
- Conditions in the market may make it inadvisable, or impossible, to raise capital by way of a **rights issue** (which are covered in section 3.5.4 of this chapter). A convertible issue may be a better option; however, interest on a company's loan capital is paid before tax (ie, the company's tax liability is calculated on the basis of the profits after deduction of interest), which makes it a lesser net cost to the company than the payment of dividends (which are paid after tax).

2.3.3 Contingent Convertibles (CoCos)

Contingent convertibles (also known as contingent convertible notes, CoCos, CoCo bonds or hybrids) are debt instruments that are designed to convert to equity upon the occurrence of a specified event.

Events that can trigger a conversion include capital adequacy concerns (eg, the company's capital ratio falls below a trigger level) and a market event (eg, the company's share price falls below a certain threshold for a set period of time). The ability to convert debt to equity in times of financial stress is particularly attractive for banks, as it allows them to meet regulatory capital requirements without immediately diluting existing shareholders – until such time as the conversion option is triggered, which typically happens during a financial crisis.

The trigger event and conversion level play a key role in determining the yield, which must be carefully considered. As such, conversion generally favours the issuer (not the holder), and this tends to be reflected in a higher yield compared to higher-ranked debt instruments from the same issuer. Further, the spreads of CoCos tend to be more closely correlated with other forms of subordinated debt than with equity.

2.4 Supranational Bonds

Supranationals are organisations created by multiple countries to support their members' economic development and to make joint decisions on issues that impact all their citizens. Examples include the European Investment Bank (EIB), the World Bank and the World Trade Organization (WTO). These entities often have decision-making powers that go beyond national borders, thereby allowing them to influence policies across member states.

As supranationals are not governments, they do not have tax revenue. Payments to holders of supranational bonds are, therefore, made from donations, investment income and loan income. As with government bonds, supranational bonds are regarded as the safest type of bond investments and have a very high credit rating.

2.5 Asset-Backed Securities (ABSs)

ABSs are an alternative to investing in corporate debt. Broadly, they are bonds where the principal and coupon payments are collateralised (or 'backed') by a pool of assets, such as loans or leases.

The origins of ABSs date back to the 1970s, with the pooling of mortgages by US government agencies Fannie Mae, Ginnie Mae and Freddie Mac into securities that could be sold into the secondary markets with the aim of adding liquidity to the housing market.

In the years that followed, the ABS market grew rapidly with the development of more innovative products, including those secured against credit card receivables, lottery and leisure ticket revenues, auto loans and even income streams from computer equipment leases.

More generally, a significant advantage of ABSs is that they bring together a pool of financial assets that otherwise could not easily be traded in their existing form. By pooling a large portfolio of these illiquid assets together, they can be converted into instruments that may be offered and sold freely in the capital markets.

That said, mortgage-backed securities (MBSs), which are a type of ABS, proved to be one of the key drivers of the severity of the global financial crisis. In the years preceding the crisis, lenders selling off debt through these products moved the loan's risk of default away from themselves to investors, in turn encouraging even riskier lending to generate short-term profits from the products they sold. Lending standards became progressively looser, where borrowers were no longer required to provide proof of their income or employment to secure a mortgage loan. As such, MBSs were a combination of mortgages to borrowers with good credit ratings, mixed together with 'junk' (or subprime) mortgages.

Despite this, between 2000 and 2007, Moody's rated more than half of the 45,000 or so mortgage-related securities it assessed as Aaa[13], indicating an extremely strong capacity for financial commitments to be met. When, therefore, millions of homeowners defaulted on their mortgage loans, banks found themselves with about a trillion dollars tied up in now worthless 'toxic assets'. This crippled the entire banking system and impacted the economy as a whole.

2.6 *Sukuk*

Islam sets out specific requirements in Islamic law (Shariah) with regard to investment. The overarching principle is that all forms of interest are forbidden. The Islamic financial model works on the basis of risk sharing: the customer and the bank share the risk of any investment on agreed terms and divide any profits between them.

13 Benmelech, E. and Dlugosz, J., 2010. The credit rating crisis. NBER macroeconomics annual, 24(1), pp.161-208.

Sukuk are bond-like instruments of equal value representing a common share in the ownership of an underlying asset, that comply with Shariah law. For example, real estate plots, utilities or services; or the assets of a specific project or investment activity.

There are several structures of *sukuk*, one of the most significant being *Ijarah*. This involves the sale or transfer (and, if applicable, lease-back) of a tangible asset for a specific period of time against a specified consideration.

Over the years, new forms of *sukuk* have been developed. For example, perpetual *sukuk* do not have a specific maturity date, but may be redeemed or amortised wholly or partially at any time at the discretion of the issuer or within specific periods; convertible *sukuk* gives the holder the right to convert the *sukuk* into the issuer's shares at a later date; and ESG sukuk are designed to fund projects that meet environmental, social and governance (ESG) criteria.

According to Fitch Ratings[14], the global *sukuk* issuance reached about $900 billion in 2024, up 8.5% year-on-year, despite global economic uncertainty. *Sukuk* are expected to remain a key financing source in core Islamic finance markets, so volumes are expected to grow in the years ahead.

2.7 Ethical and Environmental, Social and Governance (ESG) Considerations

As awareness of worldwide damage to the environment and of social issues becomes increasingly widespread, (ESG) and **ethical investing** has grown in importance and popularity.

ESG investing is based on three pillars:

- '**Environmental**' relates to environmental conservation and sustainability. Specific issues of concern include climate change, the use of pesticides and genetic engineering, air and water pollution, forest degradation and industries associated with fossil fuels.
- '**Social**' issues look at a company's relationships with its stakeholders and risks throughout their supply chains. Examples include human rights, equal opportunities, working conditions, training and development, and job creation and security. It also includes corporations that structure themselves to reduce their corporation tax bills in countries to levels that are disproportionate to the profits and activities taking place in those countries.
- '**Governance**' refers to the way in which businesses are directed and controlled, such as board structures and practices, and encompasses corporate governance, board diversity and directors' remuneration.

14 Fitch Ratings, January 2025. Global Sukuk Outlook Dashboard: 2025. Retrieved from https://www.fitchratings.com/research/non-bank-financial-institutions/global-sukuk-outlook-dashboard-2025-08-01-2025 (Accessed: February 2025)

Governance structures aim to ensure accountability, transparency and the ethical management of firms. For example:

- In the UK, the **Senior Managers and Certification Regime (SM&CR or SMCR)** is designed to increase individual accountability within the financial services sector. It applies to all FCA-authorised firms.
- The UK Corporate Governance Code provides a framework for governance practices, focusing on board leadership, corporate culture and risk management, with the most recent update in January 2024 enhancing transparency and accountability.
- In the US, the Sarbanes-Oxley Act (SOX) was passed in 2002 to protect investors by improving the accuracy and reliability of corporate disclosures. It applies to US public companies and their subsidiaries globally.

Ethical investing is the practice of selecting investments based on ethical or moral principles, focusing on companies with strong ethical practices while avoiding those deemed to be unethical, for example, choosing not to invest in a company that engages in practices such as exploiting workers in developing countries.

By investing in companies and governments that are conducting their activities in an ethical, responsible and sustainable way, or promoting ethical, responsible and sustainable practices, security prices (both bonds and equities) are supported in secondary markets, which can also assist primary market issuance. Additionally, deciding to invest in/support certain firms and governments, while refusing to invest in/support others, can send a powerful social message.

Financial products such as **green bonds** and **blue bonds** can offer a solution for investors concerned with the environmental and social impact of how their money is used.

2.7.1 Green Bonds

Green bonds are similar to conventional debt instruments, but the funds raised are used exclusively to finance or refinance (in part or in full) eligible 'green' projects with positive environmental or climate benefits. Example projects are those aimed at renewable energy, energy efficiency, pollution prevention, and clean transportation.

Green bonds are typically issued by governments and supranational organisations, as well as companies. Most have been either plain vanilla treasury-style retail bonds (with a fixed rate of interest and redeemable in full on maturity) or ABSs tied to specific green infrastructure projects.

The global green, social, sustainable and sustainability-linked bond (GSS+) market reached $5.4 trillion in 2024[15], dominated by green bonds. While this is small relative to the conventional corporate bond market (which is valued at over $100 trillion), green bond issuance has grown rapidly over the past decade, from $11 billion in 2013[16] to $1 trillion in 2024[17]. This increase is attributable largely to a growing number of issuers using the capital markets to raise finance for climate change solutions so they may achieve the goals specified in the **Paris Agreement**; and is despite interest rates worldwide reaching new highs (which, in turn, increases the cost of debt) to combat rising inflation.

A concern with green bonds is a lack of standardisation as to what constitutes a green bond, with the accompanying worry that it could become used as a convenient label for marketing purposes. As a result, the International Capital Market Association (ICMA) has developed the Green Bond Principles (GBP). These are voluntary process guidelines that recommend transparency and disclosure, and promote integrity in the development of the green bond market by clarifying the approach for issuance of a green bond. The GBP are intended for broad use by the market: they provide issuers guidance on the key components involved in launching a credible green bond. They aid investors by ensuring the availability of information necessary to evaluate the environmental impact of their green bond investments, and they assist underwriters by moving the market towards standard disclosures which will facilitate transactions.

Green Gilts

In 2020, the UK government released its Ten-Point Climate Action Plan, setting out its approach to '*build back better, support green jobs, and accelerate [the UK's] path to net zero*'. One of its pledges included the issuance of a green gilt (also called sovereign green bonds) for the first time ever to help the UK government to meet its green objectives, with a planned total issuance of at least £15 billion for the financial year.

In 2021, the UK government published its green gilt framework (developed in accordance with the GBP), which details the types of expenditures that green gilts will finance: clean transport, climate change adaption, renewable energy, energy efficiency, pollution prevention and control, as well as living and natural resources. Concurrently, areas such as fossil fuel exploration, weapons, tobacco, gaming and palm oil industries will be excluded. The first green gilt was issued in September 2021 (maturing in July 2033), raising £16.1 billion, thus making it the largest inaugural green issuance by any sovereign at the time. Further transactions into existing green gilts have occurred since.

Other governments worldwide have issued green bonds, with the governments of Germany, Hungary, Thailand and India among those making their debuts into this market in recent years.

15 Climate Bonds Initiative, November 2024. Sustainable Debt Market, Summary Q3 2024. Retrieved from https://www.climatebonds.net/files/reports/cbi_mr_q3_2024_01c.pdf (Accessed: February 2025)

16 Climate Bonds Initiative, 2015. Scaling Up Green Bond Markets for Sustainable Development. Retrieved from https://www.climatebonds.net/files/files/GB-Public_Sector_Guide-Final-1A.pdf (Accessed: February 2025)

17 S&P Global, 2024. Sustainability Insights Research: Sustainable Bond Issuance To Approach $1 Trillion in 2024. Retrieved from https://www.spglobal.com/ratings/en/research/pdf-articles/240213-sustainability-insights-research-sustainable-bond-issuance-to-approach-1-trillion-in-2024-101593071 (Accessed: February 2025)

2.7.2 Blue Bonds

With the challenge of climate change rising in investors' agendas, this has driven the launch of new and innovative products and services in the sustainable bond markets, including blue bonds.

Blue bonds are modelled after green bonds, except that they fund marine- and ocean-based projects rather than land-based ones. With water representing over 70% of the Earth's surface, and the vital role it plays in sustaining life on our planet, this has led to renewed attention to the effects of climate change and human activities (among others) on the ocean in recent years.

The world's first sovereign blue bond was issued in 2018 by the Republic of Seychelles. The proceeds of $15 million are being used to support the expansion of marine protected areas (MPAs), improved governance of fisheries, and towards developing the country's blue economy. Interest payments from the blue bond to investors are partially guaranteed by the World Bank and a concessional loan from the Global Environment Facility (GEF).

2.8 The Investment Returns on Debt Securities

Learning Objective

1.3.2 Analyse the main sources of investment risk and return associated with fixed-income securities: capital return; interest or yield; rates of interest; real returns; liquidity; credit ratings; credit enhancements; duration

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The term 'yield' generally refers to the return an investor makes on a particular investment. The income yield is the annualised income return on an investment, expressed as a percentage of the capital invested or current price; thus, a bond's yield will depend on its coupon and market price.

Sometimes, however, it is the total return – the gross redemption yield (GRY), also called gross yield or yield to maturity (YTM) – which is of more interest. This includes the annualised capital growth or loss which will be made on the investment, if it is held to maturity.

Yields may be quoted gross or net of tax. They are useful for comparing one investment with another to see which is more attractive to the investor.

The two main influences on the price of a bond are interest rates and how long the bond has to run until maturity.

The price of a bond (and, therefore, its yield) will also be affected by demand in the market. As with most markets, when there are more buyers than sellers, the price will rise. Conversely, when there are more sellers than buyers, the price will fall. One of the key factors that influences investor demand is the attractiveness of a bond compared to other investments – and this is why interest rates play a leading role in how much demand there is.

In addition, movements in the exchange rate can affect foreign demand. If the currency in which the bond is quoted is weak, the bond may look comparatively good value to an overseas investor; and if it is expected to strengthen, then they may see a holding of that bond as a good way to reap the currency gain while holding a secure investment.

We will now consider some different ways of assessing a bond's yield, taking into account its current market price.

2.8.1 Running Yield

The **running yield** (also known as the interest yield) on a bond expresses the income received on it as a percentage of the investor's outlay.

It is calculated by dividing the gross coupon rate by the market price.

$$\text{Running yield}\ (\%) = \frac{\text{Gross coupon}}{\text{Market price}}$$

Let's consider a French government bond, OAT 4.85% 2035. If the bond is trading at a price of €114 per €100 nominal, then:

$$\text{Interest yield}\ (\%) = \frac{4.85}{114} = 0.0425 \text{ or } 4.25\%$$

In other words, for every €100 actual which the investor invests in this bond, they will receive €4.25 per annum, gross, by way of interest. The running yield is usually expressed gross (ie, as a rate before deduction of income tax).

2.8.2 Capital Returns

However, the running yield does not tell the whole story for the investor – for example, it does not reflect any capital gain or loss that will be incurred.

As the rates in the market change, the prices of the bonds will rise and fall, hence the investor may incur a capital loss or gain if they resell the bond. The investor could hold until redemption, in which case we know for sure that they will be repaid its nominal value upon maturity. The capital return will depend on the purchase price:

- If the holding was bought at a price above par (that is, more than the nominal value was paid, ie, a premium), then the investor will incur a capital loss on the sale.
- If the investor paid less than par (ie, a discount), then they will make a gain.

Thus, we can use holding period return (HPR) to calculate the total return generated from holding a bond, as follows:

$$\text{Holding period return}\left(\%\right) = \frac{\text{Price received at maturity} - \text{Price purchased}}{\text{Price purchased}}$$

From this, the annualised capital gain or loss in terms of a return measure can be represented by:

$$\text{Annualised capital gain or loss}\left(\%\right) = \frac{\text{Holding period return}}{\text{Number of years to maturity}}$$

An estimate of the capital return to redemption can be calculated and incorporated into the overall return the investor will make should they hold the bond until maturity. The redemption yield (which we will look at next) reflects this capital gain or loss, in addition to the interest payments that an investor will receive.

2.8.3 Gross Redemption Yield (GRY)

The GRY assumes the investor will hold the bond to its redemption date, during which time they will receive this return annually. It also assumes that any coupons received will continue to be reinvested at a rate that is the same as the redemption yield.

To determine an approximate measure of the GRY from the coupon, bond price and the maturity of the bond, we can calculate the return in two parts: the interest yield component of the return, plus the capital appreciation component of the return.

As far as the capital appreciation component of the bond return is concerned, the investor will generally make either a capital gain or a loss, depending on whether they bought the bond above or below par.

To calculate this estimate of the GRY from the price and the coupon on a particular bond, we first need to work out the difference between the bond's current price and par, as well as the number of years it has to run.

Having determined the running yield earlier, we now calculate the return due to capital appreciation on the bond by using the formula presented above.

As already stated, the annualised capital gain or loss in terms of a return measure can be represented by:

$$\text{Annualised return from capital gain or loss}\left(\%\right) = \frac{\text{Holding period return}}{\text{Number of years to maturity}}$$

If the market price of the bond is trading below par, then there will be a positive element of capital gain per annum to be added to the interest yield. On the other hand, if it is trading above par, then the resulting return due to capital loss will need to be deducted from the running yield, to arrive at the approximate redemption yield.

Example

Let us consider the redemption yield that would have applied for the OAT 4.85% 2035, priced at €114 in 2025, which will be redeemed in 2035 (ie, in 10 years).

1. Recall from section 2.8.1 that the running yield for this bond is 4.25%.
2. The HPR is (100 – 114) / 114 = –0.1228 or –12.28%.
3. The return due to the annualised loss on capital to redemption is –12.28% / 12 = –1.02%.

From this, the approximate GRY is a combination of the running yield (in part 1) and the annualised HPR (in part 3): 4.25% – 1.02% = 3.23%.

The approximate GRY stated above is a gross yield because no account has been taken of the income tax that the investor will pay on it. Remember that, in the UK, government bonds and qualifying corporate bonds (QCBs) are not subject to CGT.

Also, in the UK, income received on bonds is classed as savings income and, therefore, counts towards the personal savings allowance (PSA). Any income above this allowance is subject to income tax at the investor's marginal rate. To calculate a figure which shows the GRY after tax, called the net redemption yield (NRY), we need to make an adjustment for the investor's income tax rate – this involves deducting the relevant tax impact on the 'income' component of the calculation. Further details on the PSA and applicable rates are covered in chapter 4, section 1.2.

Outside the UK, income tax rules and rates vary widely between countries. Due to these notable differences, it is important for individuals to be aware of how a country's tax system operates should they wish to become or remain a citizen, live in or earn money in that country.

2.8.4 Bond Volatility and Risk

There is an inverse relationship between the prices of bonds and their yields. The price variability of a particular bond that has some time left to maturity may change, depending on investor outlooks on an issuer's financial health and long-term business prospects. As a result of this uncertainty, interest rate expectations may be changeable, causing prices to remain volatile over an investment period. Rising interest rate expectations increase the redemption yield and push the prices of bonds down. Conversely, falling yield expectations lift bond prices.

The variability of each bond price across the maturity range will depend on several factors. In general, longer-dated bonds are more sensitive to interest rate changes than their short-dated counterparts. Coupons also modify the variability of the bond. High coupons damp down volatility, while low coupons or zeros increase volatility.

The price variability of a bond depends on its coupon and its maturity. Together, these features give each bond its unique character in terms of its price sensitivity to exogenous and stochastic factors that influence the changes in interest rates.

Macaulay duration (commonly referred to as duration) provides a simple measure of a bond's interest rate risk by calculating the weighted average time until its cash flows are received. This risk measure of a bond encapsulates the combined impact of the coupon and maturity effect on price sensitivity. For example, a set increase in yield will lower prices of all bonds. However, a bond with a higher duration will be more sensitive to the same change in yields than a lower-duration bond.

In general, we expect greater price volatility in:

- Bonds of a **lower credit quality** because of their greater risk and speculative nature compared to investment grade bonds.
- **Lower coupon bonds** because a small change in current interest rates represents a proportionately greater change as a percentage of a low coupon than of a high coupon.
- **Longer-dated bonds** because current interest rate expectations have a relatively greater impact on the overall return to maturity than for shorter-dated bonds.

Duration is a measure that can be used to estimate the price sensitivity of a bond to small changes in yields. The simplest measure for duration is called the Macaulay duration:

$$\text{Macaulay duration} = \frac{\sum\left(\text{Net present value of the bond's cash flows} \times \text{Time to cash flow being received}\right)}{\sum \text{Net present value of the cash flows to be received}}$$

When it is adjusted by dividing with a yield relative, it is called modified duration:

$$\text{Modified duration} = \frac{-\text{Macaulay duration}}{1 + \text{GRY}}$$

The minus sign indicates that the relationship is inverse, in other words, as interest rates rise, the price of the bond will fall and vice versa.

Once the duration of a bond has been calculated or obtained (eg, from a Bloomberg terminal), it can be used to estimate the anticipated price change of a bond, if there is a small change in interest rates (or expectations thereof). For example, if there is a 0.1% rise in interest rates, the bond with a higher duration will show a bigger drop in its price, when compared to a low duration bond. Knowledge of duration is essential for the selection of bonds in investment management and also in managing risks of bond investments in risk management.

$$\%\ \text{change in price of bond} = -\text{Modified duration} \times \%\ \text{change in the yield}$$

The duration of a bond may be affected by embedded options (eg, callable or puttable bonds) and the duration measure should be adjusted to reflect the fact that the exercise of these options will influence the expected cash flows. The adjusted measure is referred to as the 'option-adjusted duration'.

In practice, the actual relationship between bond prices and yields is not linear, but convex. Convexity is beyond the scope of the syllabus, so it is not covered in detail here. Suffice to say that because of the concept of convexity, modified duration will overestimate the fall in a bond's price and underestimate the rise in a bond's price.

2.9 Investment Risk and Debt Securities

In the following sections, we consider various factors which can affect the riskiness and performance of debt securities, including liquidity, interest rates, real rates of return, issuing institutions and credit ratings, and methods of credit enhancement. These factors combine to affect the overall risk associated with a debt security.

Bonds are generally negotiable or marketable securities – that is, they can be bought and sold (although as we have seen, some bonds cannot be sold prior to maturity so must be held until their redemption dates).

Before investing in bonds, an investor needs to consider the factors that will influence prices in the markets. As with any market, this is driven by supply and demand. The following factors affect the supply of, and demand for, bonds in the market:

- Levels of interest rates in the home currency.
- Foreign exchange rates with overseas currencies that bonds are issued in (different to the investor's currency).
- Changes in the credit rating of the issuer.
- Changes in the economic environment – in particular:
  - in the UK, the PSNCR has a large effect on the gilt and domestic bond market; in other countries, the local equivalent is also likely to be influential
  - levels of gross domestic product (GDP) and **gross national product (GNP)**, seen as barometers of the productivity and economic health of a country, and
  - unemployment figures, since these are also seen as indicative of the health of the economy – and may spark some interest rate movements if the government is trying to take action.
- The coupon and redemption date of the bond.

Sentiment in the bond market often has an effect on the equity markets as well – in part because the economic events that impact on the one also affect the other, and because bonds (particularly investment grade) are often seen as a safe haven when equity markets are falling. This is due to the fact that bond prices are generally much less volatile (ie, less prone to going up and down) than equities, because of their relative certainty of return.

Other factors are considered in the following sections.

2.9.1 Rates of Interest

Interest rate risk is the risk that market rates rise. The consequence of this for holders of fixed-interest securities is that:

- the coupon becomes comparatively less attractive than before, relative to market rates, and
- consequently, the price of the bond falls as demand for it dries up and/or investors sell in order to free money up to lock into higher rates elsewhere.

Thus, the investor suffers a 'double hit': they are locked into a bond paying rates which could be bettered elsewhere; and the price of the holding has also fallen, in line with the market. FRNs are designed to protect investors from rises in interest rates and, to a degree, inflation due to its relationship with interest rates, although the two are not perfectly correlated (see section 2.1.4).

2.9.2 Real Returns

As with deposit-based investments, the returns on fixed-interest securities can be eroded by inflation. Indeed, if inflation reaches very high levels, the real return on the bond could be negative.

As we saw in section 2.1.4, ILBs provide a degree of protection against inflation risk, in that both income and capital are adjusted for changes in a measure of inflation (eg, RPI or CPI).

2.9.3 Liquidity

As with other investments, bonds can carry liquidity risk – ie, the risk that the bond is hard to sell quickly, or can only be sold quickly at a price which does not reflect a fair market value.

Liquidity risk is less of a problem for large issues, or issues where there is a guaranteed market, such as UK gilts and US Treasuries. The most recently issued bond tends to be the most frequently traded and, hence, the most liquid, of a periodically issued security, called an on-the-run bond. In contrast, off-the-run bonds are all other issues – they tend to be less liquid than on-the-run bonds, although they are still actively traded on the secondary market. Liquidity can be a much greater problem for smaller issues and those where the creditworthiness of the issuer is less sound.

2.9.4 Issuer Risk

Issuer risk is the risk that the issuer of a bond gets into financial difficulties and cannot keep up the interest payments, or defaults on the capital.

Generally speaking, investors regard bonds as less risky than equities, because of the following:

- If the issuer has poor profits (or no profits at all) in a given year, it must still pay interest on its debt. If it cannot, it might have to pay less than promised or default on the coupon. On the other hand, dividends are paid from profits, so may be at risk in a poor year.

- If an issuer goes into liquidation, then the order of pay-out is such that investors will be repaid before shareholders. Therefore, if there are not enough assets to go around, shareholders may get nothing at all. This is because, during a liquidation, assets are sold off to raise the cash to pay off debts and there is a legally prescribed order in which that cash is distributed. Shareholders are not debtors but owners of a company, and as such are last in the pecking order.

That said, much depends on the financial status of the issuer itself. Equities issued by a large, financially sound and well-run company may in fact be a safer investment than debt issued by a company whose finances are in a poor state and which may default on its liabilities.

Still, it is fair to say that when looking at a single issuer, its debt instruments are likely to be more secure than its shares.

The price that debtholders pay for this additional security is the fact that their rewards are limited to the payment of interest and repayment of loan capital, on the terms originally specified. If the company does very well, it will not get any extra profit, whereas shareholders can hope to see their shares rise in price and to receive rising dividends each year.

The riskiest bond issuers are those falling into the junk category; junk bond issuers suffer a relatively high rate of defaults, for which investors are compensated by relatively high yields, providing that the issuer can keep up the repayments.

2.9.5 Credit Ratings

A number of issues may affect a bond's safety in terms of the likelihood of its being repaid. An investor in any form of bond is going to be keen to know what the issuer's creditworthiness is, therefore, to assess whether the returns are worthwhile in light of the risk to their interest and capital.

Generally speaking, bonds issued by governments are regarded as the most secure although, as seen in section 2.2.3, even governments have been known to default on their debts. In any event, it can be hard for an investor to assess the creditworthiness of an issuer. To help them do so, a number of specialist agencies provide credit ratings using standardised scales to bond issues. Among the most well-known agencies are Moody's, Standard & Poor's and Fitch (see section 1.10.3).

If an issuer wishes to be rated (and many do, because some investors will simply not buy debt which does not have an independent credit rating attached to it), then they will invite the rating agency to inspect its financial status and operations. The agencies then assign a rating to the issuer, and often different ratings to individual debt issues from the same issuer, depending on the seniority or otherwise of the specific issue.

The rating agencies consider various factors when assessing the ability of a company or government entity to meet the principal and interest payments. This includes, but is not limited to, their current financial strength, the economic and political background in the environment in which they operate, publicly available information about the security and data provided by the issuer being reviewed.

An issuer's rating can change from time to time with its own fortunes and those of the environment in which it operates.

2.9.6 Credit Enhancements

In order to make their bond issues more attractive to investors by reducing the risk of default, many issuers whose finances are not in good shape arrange for another organisation (generally one with very strong finances) to guarantee the debt, called a guarantor. This means that, if the issuer cannot pay the interest or capital from its own resources, the guarantor will make the repayments.

The investor therefore relies on the creditworthiness of the guarantor, as opposed to that of the issuer, for their security. An example of this is a lesser-known company arranging for its debt to be guaranteed by a major bank or insurance company.

2.10 Dealing in Debt Securities

Learning Objective

1.3.4 Understand how fixed-income securities are traded and settled: primary and secondary markets; decentralised market; retail bond markets; clearing, settlement and safe custody; pricing, liquidity and fair value; coupon; clean and dirty prices; transaction costs and charges

2.10.1 Primary and Secondary Markets

The primary (or 'new issues') market is where securities are issued for the first time. It exists to enable issuers to raise capital, and enables the surplus funds held by potential investors to be matched with investment opportunities the issuers offer. It is a crucial source of funding.

At origination, new bonds may be issued in one of several ways:

- **Offer for sale** – a syndicate of banks (with one bank as lead manager) buys the bonds *en bloc* from the issuer and resell them to investors. The banks effectively underwrite the issue since, if investors do not buy, the banks will be forced to keep the bonds. Needless to say, the banks charge fees for this risk. If the lead bank buys all the bonds and sells them to the syndicate (usually called the bought deal), then the syndicate members may themselves then sell the bonds at varying prices.
- **Fixed price re-offering** – the lead manager and the syndicate buy the bonds simultaneously and agree to sell at the same price for a period. This is a very common method for new bonds to be issued, more so in the US and the so-called euromarkets.
- **Competitive auction** – investors apply for the bonds at a price that they are prepared to pay, and bonds are issued to those investors who apply at the highest prices. This type of issue is used less frequently (apart from for government bonds).
- **Private placing** – the issuer sells bonds directly to a smaller number of professional investors.

After the securities have been issued, subsequent trading takes place on the secondary market. This is the market where existing securities are traded between investors. Sometimes, transactions on the secondary market can negatively impact the primary markets. For example, if a large proportion of investors sell their bonds in the secondary market, this can push up yields for future issues from the same entity.

2.10.2 Government and Corporate Bonds

Like shares and other stocks, bonds can be bought and sold through a stockbroker. Investors will pay the broker a commission, which may vary from broker to broker and will also depend on the size of the deal. Usually, for larger deals, stockbrokers will charge commissions based on a lower percentage of the deal size. Some brokers will also offer investment advice as to which bond may suit the investor's needs best, and on conditions in the market.

If an investor buys a bond through a stockbroker, they will pay the current market price; however, they can give their broker special instructions. For example:

- to buy at best (ie, at the best available price in the market), or
- to buy at a limit (ie, not to pay more than a certain amount for the stock; if the broker cannot complete the deal at the limit or better, they will not place it at all).

Government Bonds: Directly from the Government

One way in which private investors can deal in new issues of government bonds is directly from the relevant government. Such deals are carried out on an execution-only basis (ie, no advice is given, and the investor must make their own decisions).

To deal, investors must:

- become approved investors and set up an account – this is very similar to anti-money laundering (AML) procedures
- complete and return the appropriate dealing form, specifying the government bond in which they want to trade, and the amount in money terms (ie, not the nominal amount since they will not know the exact price at which the deal will be carried out when they post their dealing form), and
- send the appropriate payment (in the case of a purchase) with the dealing form.

For example, in the UK, gilts that are already in issue can be purchased directly from the DMO's retail gilt purchase and sale service, operated by Computershare.

The price at which the deal is done will depend on conditions on the date that the dealing form, cleared funds and any other information it needs to proceed have been received. That is, an investor cannot say *'I would like to deal at XX price or better'* (as they could if dealing through a stockbroker); rather, they get the prevailing market price, at the time the deal is placed. Thus, the benefit of potentially cheaper dealing costs is to some extent offset by this lack of control.

Commission charges on deals made this way (particularly smaller ones) may be less than those levied by stockbrokers and banks for the same sized deals, so this service can be attractive to retail investors.

UK Gilts: Direct from the DMO at Auction

In the UK, approved members of Computershare can also deal directly with the DMO to buy gilts at auction. Many large gilt issues are first brought to the market in this way, and it can represent a very cost-effective route for an investor to buy into a new issue since they do not have to pay stockbroker's commission or **bid/offer spread** (also called bid/ask spread, which is the difference in price at which a security can be bought and sold on the same day).

Example

If a gilt is described as having a price of £118–£118.25, this means that the price at which £100 nominal of that gilt can be **bought** is £118.25 and the price at which £100 nominal can be **sold** is £118.00. Thus, the bid/offer spread is £0.25 per £100 nominal.

Even though the investor does not know the price at which they will eventually deal, they do at least know that there will be minimal dealing costs.

The DMO issues an auction calendar giving details of the gilts which it proposes to auction in the months ahead; this is usually published up to a year in advance, with finalised dates as to which gilts will in fact be auctioned, and on what dates, being announced at the end of each quarter. Gilts can either be purchased directly from the DMO at its outright gilt auctions or through a secondary market. Bidders at the auctions can choose to participate through a GEMM, who can bid directly by telephone to the DMO on the bidder's behalf, or by completing an application form, providing that they are members of the DMO's approved group of investors.

At auctions, bids can be competitive or non-competitive:

- **Competitive bids** – any application can place a competitive bid submitted through a GEMM stating the price that the investor is willing to pay. A bid through a GEMM or from a client must be for one bid at a clean price, expressed as a multiple of 0.01 of £1, for at least £1 million and for multiples thereof. Investors submitting a competitive **bid price** which is too low, risk getting no stock, or only a proportion of the amount they originally bid for. Those who bid the highest prices will get as much stock as they have subscribed for, unless the issue is heavily oversubscribed, in which case, it may be allocated on a *pro rata* basis among the highest bidders.
- **Non-competitive bids** – private investors can bid on a non-competitive basis in a gilt auction for a minimum of £1,000 nominal of the particular gilt; the maximum they can bid for is £500,000. The fact that they bid on a non-competitive basis means that any application will be met in full. That is, the investor gets as much stock as they requested, at the average accepted bid price for that particular auction (ie, the weighted average price paid by successful competitive bidders). This means that someone sending in a non-competitive bid has to accept that they will be allocated stock at whatever this price turns out to be. They do not know it in advance.

Usually, investors who buy directly from the DMO at auction are institutional investors, and sometimes they bid for very large allocations of stock. As we have seen above, it is the competitive bids which are used to determine what price the non-competitive bidders will be allocated stock at.

Corporate Bonds

Unlike the market for equities, the method of dealing in corporate bonds tends to be away from the major exchanges in what is commonly described as a decentralised market. Therefore, the corporate issuer will appoint a dealer to act as distributor on their behalf in the issuance and underwriting of bond issues (there is often a combination of such roles in large financial institutions).

The primary function and role of the dealer is to provide liquidity to the marketplace, by being willing to buy or sell the bonds and effectively act as market maker, and to act as a facilitator or agent in trades between the principals. The systems that the dealers use to display their willingness to deal are numerous, with each being described as a separate 'pool' of liquidity.

Corporate bonds are usually priced at a nominal yield to a specific government bond that matches its maturity, where this spread represents the dealer's markup or profit.

Alternatively, corporate bonds can be underwritten by a syndicate to sell new offerings of debt securities to investors. In this situation, the lead underwriter (eg, an investment bank) initiates and manages the syndicate who then sells the corporate bonds on to investors and other broker-dealers. The syndicate is compensated by an underwriting spread, which is the difference between the amount that the underwriter pays the issuer for the bonds and the amount that they receive from selling them on. After the sale is completed, or if the bonds cannot be sold at the offering price, the syndicate breaks up.

While corporate bonds are traded between investors in the secondary market, like equities, many are traded over-the-counter (OTC) rather than via exchanges. This is primarily due to diversity, with a range of qualities, maturities and yields on offer. Additionally, issuers have different characteristics, all of which makes it difficult for corporate bonds to be traded **on-exchanges**. That said, the number of secondary corporate bond trading platforms is on the rise, which should help to increase liquidity and support pricing transparency.

2.10.3 Retail and Wholesale Bond Markets

As their names suggest, retail bonds can be sold to retail clients and investors, while wholesale bonds can be sold to institutional clients or investors (eg, large funds, banks and pension funds). The wholesale bond markets are far bigger than the retail bond markets, and they offer a greater variety of bond types and a bigger universe of securities.

Retail bonds allow companies to raise capital by borrowing from investors at a fixed rate, for a set period. Thus, they are an alternative to bank debt, private placements and institutional bonds. Generally, they have terms of between five and ten years.

The method of distribution differs between retail and wholesale bonds. Retail bonds are generally offered via intermediaries (eg, wealth managers) on an exchange, whereas wholesale bonds are sold OTC direct to institutions by investment banks sales teams and in larger denominations.

In the UK, the LSE's Order Book for Retail Bonds (ORB) platform is an order-driven trading service that allows issuers to directly distribute a range of gilts, supranational bonds, and UK corporate bonds to retail investors, thereby stimulating activity and offering wider investment opportunities to private investors.

The ORB offers issuers greater flexibility by allowing them to tailor the size of retail bond issues to meet their requirements, with issue sizes ranging from £20 million to £300 million. This flexibility enables issuers to issue bonds with the option of issuing in smaller sizes and more frequently.

Operating similarly to share trading mechanisms, the ORB allows market makers to offer two-way prices on fixed-interest securities during trading hours (ie, 08.45 to 16.30), with a minimum price movement ('tick size') of £0.01. Bonds are traded in the denominations specified in the prospectus, and all trades are traded automatically, reported and published immediately.

All trades are executed on a clean basis without accrued interest. The settlement time varies depending on the type of bond and the country of issuance – for example, UK gilts are settled T+1 (ie, one business day after the transaction date) and corporate bonds traded on the ORB at **T+2**.

2.10.4 Pricing, Liquidity and Fair Value

Many bond prices are quoted in newspapers (such as the *Financial Times*) and online vendors (such as Bloomberg and Reuters).

The prices quoted are:

- the mid-market price (ie, the mid-point between buying and selling prices), and
- clean prices, (ie, they take no account of accrued interest).

It should be noted that the bond market is more of a dealer market in which dealers buy and sell from their own inventory, so trading individual securities quickly may not be possible if there is less liquidity in the market at any given point in time. Thus, obtaining accurate prices, (especially of illiquid securities), may therefore present difficulties.

A bond's market price is not necessarily a reflection of how much that bond is worth (ie, its fair value). Determining the fair value of a bond involves calculating its cash flows and nominal value – see chapter 3, section 1.2.

2.10.5 Clean and Dirty Prices

As we have seen in section 2.1.4, interest on a bond is paid at set periods. However, it accrues on a daily basis – that is, every day an additional 1/365th (or 1/366th in a leap year) of the total annual interest becomes due to the owner. For example, someone selling a bond between two coupon periods will be compensated for the interest that was due to them up to the settlement date of the sale, and whoever buys it will have to pay for that accrued interest.

Thus, the price paid for the bond (the market price multiplied by the nominal amount being traded, called the 'clean' price) is adjusted by an amount for the accrued interest to date (up or down, depending on if the individual is buying or selling, called the 'dirty' price). The accrued interest is calculated up to, and including, the settlement date.

This adjustment is calculated as follows:

$$\text{Accrued interest} = \text{Interest payment amount} = \frac{\text{Number of days since last payment}}{\text{Number of days in the coupon period}}$$

For gilts, for example, this is usually one working day after the deal date.

Example

Staying with gilts to illustrate the point, 4¼% Treasury Stock 2032 pays interest on 7 June and 7 December. An investor who bought a holding in it for settlement on 7 July (that is, a month after the previous coupon payment) is also buying 30 days of accrued interest. Having done this, they will then become entitled to the next full interest coupon payment on 7 December (ie, six months later, or 183 days).

In this case, the adjustment is:

(4.25%/2) x (30 / 183) = £0.35 per £100 nominal of the gilt.

A prescribed number of working days before the interest payment date (eg, seven days for a gilt), the price of a bond goes **ex-dividend** (also written as xd). Ex-dividend means 'without the dividend', so anyone buying the bond between now and the imminent interest payment date will not receive the upcoming interest payment, unless they have bought it on special terms that have been advised to the registrar. This ensures that the registrar knows who is entitled to receive that payment. While the term 'dividend' is typically used in relation to shares, it is a convention in bond markets, where it refers to the interest payment that will be made.

Anyone who holds the bond on the xd date will get the full interest payment. Anyone who sells the bond between the xd date and the pay date (ie, within the xd period) will receive the full interest payment; however, they will have to pay some of it back to the person who they bought the bond from, since they will have obtained a few days' interest to which they were not entitled.

Sometimes, those trading during the xd period may agree to request that the registrar pay the entire forthcoming interest payment to the buyer – despite this not being the usual convention. This is called buying **cum-dividend (cum-div)** , where cum is Latin for 'with'.

You may see the following adjustments quoted in respect of a bond deal to ensure that an investor gets the exact number of days' interest that they have held it for:

- **Investor buys cum-div** – interest from the last payment date to the settlement date is added to the cost.
- **Investor buys ex-div** – interest from the settlement date to the next payment date is deducted from the cost.
- **Investor sells cum-div** – interest from the last payment date to the settlement date is added to the sale proceeds.
- **Investor sells ex-div** – interest from the settlement date to the next payment date is deducted from the proceeds.

2.10.6 Transaction Costs and Charges

Transaction costs in bond markets can vary depending on how the bonds are bought or sold. In the primary market, investors may face underwriting spreads, which represent the difference between what the underwriter pays the issuer and what the bonds are sold for in the market. In the secondary market, costs such as brokerage commissions, bid/offer spreads and, potentially, market-making fees can apply.

For example, stockbrokers typically charge a commission that varies depending on the deal size, with lower percentages often applied to larger trades. Additionally, when purchasing directly from government issuers or through specific auction mechanisms (eg, the UK's DMO), investors may avoid certain broker commissions, although the absence of control over the transaction price might offset these savings. The cost structure for corporate bonds can also differ, as these are often traded OTC, with prices reflecting dealer markups.

2.11 Bond Indices

Learning Objective

1.3.5 Understand the purpose and construction of the main bond indices and the considerations needed for less liquid markets

A bond market index is a composite **listing** of bonds that provides a benchmark for measuring performance in the portfolio management process. Compared with equity indices, bond indices are relatively new (the first being introduced in the 1970s) and they are not as widely published. However, the need for reliable benchmarks to assess performance has increased in recent years, driven by growth in bond fund investments and the expansion of institutional bond portfolios, which has led to a wider range of bond indices being offered by various vendors.

Compared with equity indices, it is quite challenging to create and compute a bond market index. There are several reasons for this:

1. The universe of bonds is much larger than equities, with securities offered in a range of maturities combined with issuers (both from the government and corporate sectors) who have a variety of long-term credit ratings.
2. Many bond indices are issuance-weighted, meaning that the index represents the most indebted issuers.
3. Bonds have other clauses such as calls, convertibility or sinking fund features that make it difficult to create a suitable benchmark that can be used to assess all the bond funds available to investors.
4. As older issues are redeemed, new ones may be issued with characteristics that may differ from the ones they replaced. This means the universe of securities, from which indices are created, will change more frequently to represent the changed population in the bond universe.

All of this makes it difficult for bond traders and index providers to replicate a bond benchmark efficiently. Similarly, some bond indices that have illiquid bonds in them may not be investable as easily as the comparable equity indices. It is for this reason that bond **exchange-traded funds (ETFs)** have become increasingly popular with both retail and institutional investors.

2.11.1 Types of Indices

Bond indices can be categorised based on their broad characteristics, such as whether they are composed of government bonds, corporate bonds, emerging market bonds or asset-backed securities. They can also be classified based on factors such as credit rating or maturity date. Additionally, some indices focus on specific types of bonds such as ILBs or those with ESG criteria.

Bond indices are generally total return indices; in other words, they account for two categories of return: income and capital appreciation. Income includes interest, distributions or dividends paid by the investment, while capital appreciation represents the change in its market price. That said, some indices are capital return indices – these are arithmetically-weighted indices based on the clean price, and weighted by the nominal amount outstanding.

In addition to returns, bond indices also incorporate the combined yield, duration and convexity of individual bonds.

Bond indices generally include more individual securities than stock market indices; they are broader and more rules-based. This allows portfolio managers to predict which type of debt issues will be eligible for each index.

A popular general index family of global fixed-income indices are the Bloomberg Fixed Income Indices. One of the most recognised is the Bloomberg Global Aggregate Index, – which measures the performance of global bond markets (both developed and developing) including government, government-related and corporate bonds, as well as ABSs and MBSs.

To be in this index, a bond must be rated at least Baa/BBB using the middle rating of Moody's, S&P and Fitch – if ratings from only two agencies are available, then the lower is used; and if only one rating is available, then that rating is applied.

FTSE Russell provides investors with a comprehensive range of options within the global fixed income investment landscape. All of its indices are founded on a transparent and rules-based framework for constructing benchmarks.

J.P. Morgan Bond Indices offer a comprehensive set of indices for tracking global bond markets, with some dating back to 1985. Among them is their Global Government Bond Index, a major index from which sub-indices have emerged – this includes government bonds of Australia, Belgium, Canada, Denmark, Germany, Italy, Japan, the Netherlands, Spain, Sweden, the UK, the US and emerging markets.

All in all, these bond indices help managers to develop effective investment strategies. The selection criteria, which require constituent securities to have a 'bid and offer quote', also referred to as a 'bid and ask quote' ensure that the indices offer an accurate and neutral representation of the market for investors.

2.11.2 Weighting

Most bond indices are weighted by total issuance value. This means that the more debt that a country or company takes on, the greater the allocation in the index. Therefore, a 1% change in the price of the largest bond in the index will have a greater impact on the value of the index than a 1% change in the price of the smallest. Since the bond price is always changing, it follows that all the largest bonds are not always the same.

2.11.3 Indices and Passive Investment Management

As we saw in section 2.11, bond indices are harder to replicate than stock market indices. Usually, portfolio/fund managers define suitable benchmarks for their portfolios/funds, and use an existing index or create blends of indices based on their investment mandates. They then purchase a subset of the issues available in their benchmark and use the index as a measure of the market's return against which to compare their own performance. Often, the average duration of the market may not be the most appropriate duration for a given portfolio/fund. Replication of an index's characteristics can be achieved by using bond futures to match the duration of the bond index.

2.11.4 Additional Calculations

Other fundamentals of bond indices that are calculated include:

- average coupon
- average gross redemption yield (GRY)
- average time to maturity
- average (Macaulay) duration
- average modified duration
- average convexity
- the sum of the nominal value (NV) of all bonds in each index
- the number of bonds in each index, and
- the weight of the index in relation to its relevant aggregated index (when applicable).

2.11.5 Quality-Controlled Price Sources

The capital and total return indices are calculated using indicative pricing from the key dealer banks in each market. The design of the methodology and availability of the price sources ensures a single price for each bond in the index. For example, FTSE applies quality controls to ensure each single price in the index is unbiased and representative of the market.

The prices used for the calculation of the indices are based on data and real-time price quotations. To calculate the price, the arithmetic mean between the bid and offer quotes (mid-prices) is used in the indices.

2.12 Selecting Bonds and Bond Funds

Learning Objective

1.3.6 Analyse the factors to take into account when selecting bonds and bond funds: bond fund strategies; bond characteristics; direct bond strategies; indirect investment; advantages and disadvantages of investing in bonds and bond funds; bond market conditions; environmental social and governance (ESG) factors

2.12.1 Bond Funds

Investment in bonds can be achieved in two ways:

- **directly** through a stockbroker/government agency responsible for managing the government's debt (eg, the DMO in the UK), or
- **indirectly** through a fund managed by a professional fund manager and marketed to investors by a retail fund management group.

Indirect investment is a simple and effective way of investing without investors getting involved in the effort and costs of buying and selling on their own account.

Money from a large number of investors is pooled together and invested in a portfolio of bonds – in the case of an actively managed fund, these bonds are selected and managed for the investor by a fund manager, while for a passively managed fund, the portfolio mirrors a specific bond index.

Additionally, bond funds can be used to provide access to the underlying securities at a more affordable cost, and to a much broader spectrum of investors. For example, T-bills are only available to new investments for sums in excess of £500,000, and are out of reach of most private investors.

Bond funds also provide greater liquidity to investors, as they retain an amount of cash within the fund to facilitate any redemption requests.

Using a broad spread of underlying securities can also help to diversify risk away from the investor, so, in this way, the risk potential can vary between funds and is dependent on the type and number of securities held. The performance of bond funds can be compared with sector indices and averages, and against the underlying performance of the individual securities themselves.

Factors to consider when selecting a suitable bond or bond fund for inclusion within a portfolio include the:

- investor's preferences for income or growth
- length of time they are prepared to keep their money invested
- level of access required
- amount of risk that they are prepared to take, and
- tax consequences on sale.

A number of bond strategies can be employed to deliver income or capital returns to investors, which include duration positioning, yield curve positioning, **asset allocation** and security selection. Qualitative and quantitative market analysis can be used to provide a framework for bond investment decision-making. The credit rating of the debt can be used to determine the risk of capital loss to the investor while providing opportunities to deliver increased returns over traditional government bonds.

2.12.2 Bond Fund Strategies

The following are examples of bond fund strategies:

Active Bond Strategies	Passive Bond Strategies
• **Duration switching** alters the portfolio duration with expected changes in interest rates. For example, an investor expecting a fall in interest rates may increase the duration by replacing low- with high-duration bonds. • **Riding the yield curve** involves buying a long-term bond but selling it before maturity to profit from a declining yield over the bond's life. This is a valid strategy when the yield curve is upward sloping. • **Bond switching (or swapping)** exchanges one bond for another. There are three main types: ◦ **Anomaly switching** moves between two bonds similar in all respects apart from their yields and/or prices. This pricing anomaly is exploited by switching away from the expensive to the cheap bond. ◦ **Policy switching** switches between two dissimilar bonds, to take advantage of anticipated changes in interest rates, the structure of the yield curve, bond credit ratings, and so on. ◦ **Intermarket spread switching** moves between government and corporate bonds with different terms (eg, coupon rate, maturity date, credit rating) to obtain a more positive yield spread.	• **Cash flow matching** simply purchases bonds whose redemption proceeds will meet a liability as they fall due. • With **immunisation** (or duration matching), an investor buys a portfolio of bonds with a duration (not maturity) equal to any liabilities. • **Laddering** involves buying bonds with a range of different maturities, thus reducing sensitivity to interest rate risk. As each bond matures, funds become available for withdrawal, or can be reinvested in bonds with later maturities. • **Bullet portfolios** invest in bonds with durations close to that of the liabilities; eg, an investor with a liability due in ten years could construct a bullet portfolio of nine- and 11-year duration bonds in equal proportions. • **Barbell portfolios** involve investing in a portfolio of both short- and long-dated bonds; eg, one- and 30-year bonds. • **Combination (or horizon) matching** is a hybrid strategy that involves matching early liabilities with cash flows, and later liabilities with immunisation strategies.

2.12.3 Advantages and Disadvantages of Investing in Bonds and Bond Funds

Advantages	Disadvantages
• Bonds pay higher interest rates than savings accounts. • Bonds usually offer a relatively safe return of principal. • Bonds often have less volatility than stocks, especially short-term bonds. • Bonds offer regular income. • Bonds need less careful attention in management than other investments. • Inflation-linked bonds and floating rate notes offer protection against rising inflation and/or interest rates. • It is possible to compound interest within a bond fund, thus helping investors' money to grow faster.	• Conventional bonds offer no protection against rising inflation or interest rates. • Even though they are generally less volatile than equities, bond prices can be quite volatile because market interest rates vary after a bond is issued. • Over the long term, bonds have lower returns than equities. • Depending on economic conditions and demand, a bond can be difficult to sell, and can therefore be less liquid than equities. • Individual bonds do not compound their interest. • Diversification is hard to achieve unless investing in bond funds.

2.12.4 Bond Market Conditions

The bond market has evolved substantially over the years. Up until the 1970s, it was primarily a place where US and European governments and large companies could borrow money to keep the economy running or to finance their activities respectively. The most likely buyers were insurance companies and pension funds who sought high-quality, very safe investments to cover their future liabilities.

It was only in the 1970s and 1980s, when the bond market became larger and more diverse, that investors realised they could make profits by trading bonds in the secondary market, causing their interest to grow. In turn, bonds had to undergo greater and more frequent price changes such that they could be traded more readily.

At over $140 trillion in size[18], the bond market today is by far the world's largest securities market, with investors choosing to buy bonds for the purpose of generating an income, preserving or appreciating capital, diversification within a portfolio, or as a potential hedge in the event of an economic downturn. To meet investors' ongoing requirements, issuers have created more innovative and tailor-made products via new asset classes such as inflation-protected securities, high-yield (HY) bonds, asset-backed securities (ABSs) and, more recently, green and blue bonds.

Due to the perceived higher risk relative to their developed peers, emerging market (EM) bonds tend to offer higher yields. It is important to remember that with this extra return comes heightened risk due to potential political and socioeconomic instability.

18 Barclays, January 2025. Survey says…electronic trading in Fixed Income is hitting new heights. Retrieved from https://www.ib.barclays/our-insights/3-point-perspective/survey-says-electronic-trading-in-fixed-income-is-hitting-new-heights.html (Accessed: June 2025)

That said, many emerging economies are much better managed than they were in the past, such that they have been assigned investment grade credit ratings. For example, the S&P credit rating for China stands at A1/A+[19], and the country's ten-year government bond has a nominal yield of about 1.6%[20].

In contrast, government bonds from the US, many European countries (such as Germany and Switzerland) and Japan have historically traded for prolonged periods at low or zero nominal yields – in other words, investors would have received less money upon maturity than the original purchase price of the bond. This situation raises the question: why would investors buy bonds that result in an immediate loss? They may be willing to do so for several reasons – eg, they may anticipate the yield to become even more negative; in which case, the bond price would increase due to the inverse relationship between yields and prices, thus allowing investors to make a profit.

2.13 Environmental, Social and Governance (ESG) Factors

ESG considerations were discussed in section 2.7. By investing in companies and governments that are conducting their activities in an ethical, responsible and sustainable way, or that promote ethical, responsible and sustainable practices, security prices (both bonds and equities) are supported in secondary markets, which can also assist primary market issuance. Additionally, deciding to invest in certain firms and refusing to invest in others can send a powerful social message.

Investors seeking to make a positive impact from their bond investment may consider several products that aim to do good, such as green bonds (see section 2.7.1) and blue bonds (see section 2.7.2). Other examples are included in sections 2.13.1 to 2.13.4.

Should bonds lose their ESG status (which, in the case of green bonds, is known as 'falling from green grace'), then issuers may suffer reputational damage, and the resultant downward pressure on prices could put investors' capital at risk. In this event, investors may seek penalties from issuers who break their agreed sustainability clauses, even if the bond is paid in full (eg, a 'green default' for green bonds).

Investors must, therefore, carefully and thoroughly evaluate a variety of factors, such as the investment focus, selection criteria and evaluation methodology before investing. However, there is a lack of high-quality research, which makes it difficult (if not impossible) for investors to make informed decisions about the environmental quality of the underlying assets.

With green and other sustainable bonds, the final recourse is to the issuer of the bond and not the projects themselves – therefore, the credit rating of such bonds is often the same as for a conventional bond from the same issuer. If the credit risk is the same, then theoretically the yield should be the same.

When demand for green and other sustainable bonds outstrip supply, it can drive up prices above their face values. As a result, these bonds can trade at a premium (known as a 'greenium' for green bonds) – this level of premium relative to their conventional peers will depend on various factors, including the country in which the bond has been issued, the currency in which it is denominated and broader macroeconomic conditions.

19 Trading Economics, 2025. China – Credit Rating. Retrieved from https://tradingeconomics.com/china/rating (Accessed: February 2025)

20 World Government Bonds, 2025. China 10 Years Bond – Historical Data. Retrieved from http://www.worldgovernmentbonds.com/bond-historical-data/china/10-years/ (Accessed: February 2025)

Additionally, the premium estimate can vary considerably over time. If held to maturity, issuers pay on the bond's face value, with the premium representing the capital loss for investors.

Another concern surrounding green and other sustainable bonds, and one of the biggest barriers for investors, is their relative lack of liquidity in both primary and secondary markets. While this issue is also applicable to conventional corporate bonds, the sustainable bond market is still small relative to the overall bond universe, so entering and exiting positions is more difficult. However, as the market continues to grow, liquidity for such bonds should continue to improve.

2.13.1 Social Bonds

Social bonds are an extension of the approach behind green bonds and are similar in structure. The proceeds are used to fund eligible projects (either partially or in full) with a non-environmental but beneficial theme, typically with social objectives in mind. Project examples include basic infrastructure, health services, and affordable housing, in particular those where the people most likely to benefit are living below the poverty line.

The first ever social bond was issued in 2006 by the International Finance Facility for Immunisation (IFFM). Proceeds were used to fund immunisation programmes in developing countries, aiming to combat diseases such as measles, polio and tetanus among children.

Like green bonds, the ICMA has issued a set of Social Bond Principles (SBP). These are voluntary process guidelines where issuers may align their framework to market expectations, in turn giving investors' confidence that their proceeds will finance projects with a positive social impact.

Despite the similarity in name, social bonds (as defined by the SBP) should not be confused with 'social impact bonds', which are described in section 2.13.4.

2.13.2 Sustainability Bonds

Sustainability bonds exclusively use funds raised to finance or refinance a combination of both green and social projects. As with green and social bonds, the ICMA has issued a set of Sustainability Bond Guidelines (SBG). This is a set of voluntary process guidelines that aim to improve transparency and disclosure to this market while also promoting integrity.

2.13.3 Sustainability-Linked Bonds (SLBs)

Unlike other types of sustainability bond that earmark proceeds for specific green or social projects, sustainability-linked bonds (SLBs) are not restricted to such uses. Instead, the proceeds can be used for general corporate purposes, but the bonds are tied to the issuer's performance on defined sustainability targets – ie, key performance indicators (KPIs) – over a set period. Issuers must define and commit to a sustainability path for that period, and if the targets are not met then certain bond terms (eg, the coupon rate) may adjust accordingly.

SLBs, therefore, offer more flexibility and serve as a complementary financing instrument to green, social and sustainability bonds.

In 2020, the ICMA issued a set of Sustainability-Linked Bond Principles (SLBP). Again, these are voluntary process guidelines, and they outline best practices for launching a credible SLB.

Together, the GBP, SBP, SBG, and SLBP are referred to as the 'Principles'. A list of green bonds, social bonds, sustainability bonds and SLBs issued is given by the ICMA[21].

2.13.4 Social Impact Bonds (SIBs)

Social impact bonds (SIBs) are finance-raising instruments designed to raise funds to achieve social objectives. In terms of structure, they are generally very different from conventional bonds, primarily focusing on the social benefit (ie, social impact) rather than the investment potential. Investors receive pay-outs based on specific social criteria being met.

While the bonds operate over a fixed time period, they do not offer a fixed return. Instead, the repayment of investors depends on specified social outcomes being met. In terms of risk, they might be more akin to an unusual, structured product or equity rather than any bond in the conventional sense of the word.

SIBs are perhaps better described by some of their other names, such as 'pay for success financing', 'pay for success bonds', or 'social benefit bonds'. They are contracts with the public sector in which commitment is made to pay for improved social outcomes that result in public sector savings.

Governments use SIBs to help address a range of entrenched social problems they have consistently struggled with, including children in care, homelessness, youth unemployment, or long-term health issues. Traditional models have failed to deliver innovation and focus on results needed to make inroads with these issues. SIBs bring together the public, private and voluntary sectors to solve these challenges by having a clear and relentless focus on delivering positive outcomes.

SIBs are a tool that can enable organisations to deliver outcomes contracts and make funding for services conditional on achieving results. Social investors pay for the project at the start and then receive payments based on the results achieved by the project.

3. Equities

Learning Objective

1.4.1 Understand the characteristics and differences between the main types of shareholder equity: ordinary; redeemable; non-voting; preference; convertible preference

3.1 What are Equities?

Companies raise their initial capital – the money to carry on their activities – in two ways: through loan stock (bonds) and through share capital (equities), also called ordinary shares or common stock). In this section, we will consider equities.

21 International Capital Market Association, 2025. Sustainable Bond Market Data. Retrieved from https://www.icmagroup.org/sustainable-finance/sustainable-bonds-database/ (Accessed: February 2025)

Equities are also called ordinary shares or common shares, although there is a key difference between them:

- **Ordinary shares** have a nominal value (eg, ABC plc Ord 50p). This style is used in the UK, Australia, Bahrain, China, Singapore and Spain, among others.
- **Common shares** (also called common stock) have no nominal value. This is the preferred legal form in the US, Dubai, Egypt, Greece and Japan, for example. Nominal value of equity securities is covered in more detail in section 3.6.3 of this chapter.

Two key differences between bonds and equities are as follows:

Bonds	Equities
• Investors who hold loan stock are creditors of the company. The company owes them a debt, which they have to repay, but they have no ownership interest in the company.	• Shareholders are the company's part-owners, and they have rights that attach to that ownership. The directors have a duty of care to the shareholders, as they are responsible for looking after their capital. However, this ownership means that shareholders bear more risk, compared with investors in corporate bonds.
• Bondholders expect to receive interest and a nominal amount of capital back on maturity; there is generally no additional profit or gain if the company is doing very well. The only real risk is that of the company running into financial difficulties so serious that it cannot repay its creditors – thankfully, not a very regular occurrence, although it can happen.	• Shareholders generally have a much greater exposure to the company's financial fortunes. If the company does well, they may receive a rising income stream in the form of dividends, and the value of their shares can increase substantially. However, if a company performs poorly, it may pay falling dividends, or no dividend at all; and its share price may also fall, potentially becoming worthless if the company gets into real trouble.

We will examine the second concept regarding dividends and capital appreciation in more depth as we progress through the chapter. For now, it is enough to remember that shares are generally characterised by the relative insecurity of both income and capital over the short term (some types more so than others), but they offer a much higher probability of producing real growth over time than cash and bonds, for example.

There are different types of share in a company, with different rights and investment risks attached to them. We will look at these next.

3.2 The Different Types of Shares

3.2.1 Ordinary Shares

As we have noted, ordinary shares are sometimes also called equities, because the people who own them are entitled to the equity in the company which has issued them.

Shareholders' fund is a value on the statement of financial position (also called the balance sheet) of the shareholders' interest (or equity stake) in a company. More generally, the shareholders' funds also equal, and represents, all the company's assets less all its liabilities.

Items within the shareholders' funds are share capital, reserves and retained profits. More specifically, the share capital is an accounting number that reveals the issue of ordinary and preference shares in the company. The monetary values of these shares are calculated by taking the par (face values) of the individual shares and multiplying by the number of shares issued to shareholders.

From this, it should be apparent that someone holding shares in a company has a stake in that company – as mentioned above, they are its part-owners, along with all the other shareholders.

An ordinary shareholder can buy their holding in one of two main ways:

- **Participating in the primary market** – by buying them as new shares, when the company first issues them via an **initial public offering (IPO)**. A company does this to raise money to invest in its business (eg, to buy new premises, carry out new research, or expand into new markets).
- **Dealing in the secondary market** – by buying existing shares which are being traded on the stock market. The shares pass from buyer to seller, and the company does not receive any new funds from this activity.

A company's ordinary share capital is an important part of the way in which it funds its activities – probably the most important part, in fact. It represents the owners' stake in the company and is generally permanent in nature. It will not get repaid (in the way that a bond will, on its redemption date), unless and until the company is wound up, or some other major event takes place.

Investors who hold shares do so in the hope that the company will do well and that they will earn a return from them over and above what they originally paid for them. This might be in one of the following forms:

- **Capital growth**, in that if the company does well, the price of its shares should go up. The investor hopes they can, eventually, sell the shares for more than they paid for them.
- **Income**, by way of dividends. Many types of company distribute much of the profits they make in any year to shareholders by paying a dividend to them. Companies generally pay dividends twice a year: an 'interim dividend' part way through, and a 'final dividend' once final results are announced. Some pay dividends quarterly (ie, four times a year) after the company has finalised its statement of financial income (also called the income statement). An alternative to paying dividends is share buybacks, where the company repurchases its own shares – this reduces the number of outstanding shares and potentially boosts the value of the remaining shares.

Ordinary shareholders also generally have voting rights – for example, they can vote on certain issues affecting how the company is run (eg, the appointment of its directors and auditors). This does not mean the ordinary shareholders exercise direct control over the company's day-to-day affairs (this job is the responsibility of the company's directors); however, they do have an indirect influence on a company's management (eg, if they are unhappy with its performance, they may not support the directors' pay awards, when the time comes to vote on them).

Investing in shares involves risk – both in terms of whether the investor's shares will fall in price, and in terms of whether the company will make enough profits to pay steady, and rising, dividends:

- If the company does not do well (or indeed, if the sector in which the company operates or the stock market as a whole is performing badly), then share prices may fall. When this is so, an investor who has to sell their shares at that point may make a loss. Thus, shares are really only appropriate investments for people who can stand the risk of some loss – and who are able to tie their money up for a reasonable period (usually regarded as being five years or more).
- If a company is wound up (put into liquidation, with all its assets being sold to pay off its liabilities) then the ordinary shareholders are the last in line for any pay-out. Thus, there is the possibility there may not be enough money left to give them a pay-out at all: all the money might be spent on paying off the company's creditors (including, of course, its bondholders).

Their reward for taking on this level of risk is that if the company does very well, they may make handsome capital gains, with (theoretically, at least) no limit on how high these could be and if profits remain strong, they may receive stable and rising dividends.

Public-listed or even private companies can issue ordinary shares of different classes or types. The difference between classes usually relate to the rights their shareholders have compared with one another, which means that each class may appeal to a different type of investor (as they may help them satisfy different investment objectives). From the company's perspective, these classes give the directors more flexibility to make decisions about managing the long-term growth of the firm.

Usually, the distinctions between the share classes are determined by the voting or dividend rights attached to the share. Holders of 'straight' ordinary shares will have full voting rights, and will be entitled to any dividends declared and paid by the company. A few examples of others are set out below.

Redeemable Shares

Usually, there are two ways that a company can repurchase its shares: buy them back from the market or retire shares by redeeming shares of a certain class.

Along with ordinary shares, redeemable shares are issued by a company, with an agreement to buy back these issues from the shareholders after a certain date or at some specified future date. These shares cannot be used as a single financing method, and must form part of a package of ordinary shares containing non-redeemables.

Often, a company can only issue redeemable shares if its articles of association provide for it. Also, all the details of the redemption, including the date of redemption and the price to be paid for the shares at that date, will be contained in the articles.

The exact nature of such issues is determined by the directors and laid out in the shares' terms of issue. The shares can be redeemed at the directors' discretion from distributable profits or from the issue of new shares to the public. Redeemed shares are retired and reduce the share capital of the firm.

Dual-Class Shares

Redeemable shares should not be confused with dual-class shares, whereby various types of shares are issued by a single company. With this, companies offer one share class to the general public with limited voting rights (called 'non-voting ordinary shares' or 'A' shares) and another share class for company founders and executives, among others, which has more voting rights so that they maintain majority control of the company (called 'founder shares'). The share classes may also pay different rates or amounts of dividends.

Deferred Dividend Shares

Holders of these shares have full voting rights, and rank equally with the other ordinary shareholders if the company is liquidated. However, the payment of dividends to them is deferred until a condition has been met (for example, a specific amount of time having elapsed since the shares were issued). Again, these usually trade at a lower price than the 'ordinary' ordinaries; they may also, during the deferral period, suit investors who are more interested in capital growth than income (perhaps because they are higher or additional rate income taxpayers, or because they already have enough income from other sources).

Deferred Ordinary Shares

This class of share is typically issued to the founder members or executives of a company. Holders usually receive little or no dividend until all other classes of shareholder have been paid, or if the ordinary shareholders have been paid a specified minimum dividend (thus, deferred ordinary shares are riskier than other share classes). That said, they are entitled to a larger share of the company's profits in the future. Deferred ordinary shares, therefore, aim to keep company management and investors intact through a company's evolution, from a start-up to a public limited company (plc). For this reason, these shares are also sometimes called founder shares.

3.2.2 Preference Shares

Preference shares give their holders superior rights and security, over and above those of ordinary shareholders.

These additional rights relate mainly to the:

- payment of dividends, or
- repayment of capital if the company should be wound up (ie, go into liquidation).

The price that holders pay for this additional safety, however, is that the returns a holder can earn are generally limited. In contrast, theoretically, if a company does spectacularly well, then there is no limit to the returns that the ordinary shareholders might receive.

Since preference shares are not technically equity capital (ie, their holders do not participate fully in the risks of the business), they are not referred to as equities.

The main features of preference shares are as follows (you may wish to compare them with the features of ordinary shares and, where possible, bonds issued by companies):

- Dividends on preference shares are generally fixed and are expressed as a percentage of the nominal value of the shares.
- Preference shareholders get priority in the payment of their dividends over ordinary shareholders. That is, ordinary shareholders will not receive their dividend unless and until preference shareholders have received their dividend. If there is not enough profit to go round, ordinary shareholders may go short.
- Preference shareholders usually also take priority when the company goes into liquidation. However, all they receive will be the nominal value of their shares (not the market value).

Like ordinary shares, there are also different types of preference shares and the exact rights that each type carries varies.

The main types of preference shares are as follows:

- **Cumulative** – if the company has not made enough profit to pay the preference shareholders' dividends in one year, then the unpaid dividend is accumulated and will be paid when the company does have sufficient profits. This may mean the ordinary shareholders have to wait for some time before they receive their dividend (ie, until any arrears on the preference dividends have been 'caught up'). Usually, preference shares are taken to be cumulative unless there is something to the contrary in the title (eg, 'non-cum. pref. shares').
- **Non-cumulative** – any unpaid dividend is not accumulated, and preference shareholders must wait until the next dividend declaration to receive anything. Ordinary shareholders are, therefore, in a better position since they do not have to wait until preference shareholder arrears have been paid off.
- **Participating** – preference shareholders receive a fixed dividend (as for traditional preference shares), but they also have the right to participate in surplus profits, along with the ordinary shareholders. The extent to which they participate in this way will vary from company to company.
- **Redeemable** – the company has the right to redeem the preference shares at some point in the future. This may be on a fixed date, or at a time chosen by the company. When a company redeems shares, preference shareholders return them to the company, which pays the shareholders a sum of money for the shares and then cancels them; this reduces the company's total issued share capital.
- **Convertible** – the preference shareholders have the right to convert their shares at some point in the future to a specified number of ordinary shares.

Often, preference shares have a combination of these features, so you might see a share with a name like 'XYX plc £1 Cum. Red. Pref. shares'.

Potential investors should ensure that they have investigated the precise terms and conditions before investing; their stockbroker can usually help them do this.

3.3 Private Equity

Learning Objective

1.4.2 Understand the characteristics and differences between the main types of private equity share capital

The private equity market provides capital to invest in unquoted companies, including public companies that are delisted as part of the transaction. These investments may take the form of a purchase of shares from an existing shareholder (a buy-out if control is acquired) or an investment in new shares providing fresh capital to the investee company (development capital). Frequently, both types of funding are provided in any given transaction.

The term 'private equity' has no consistently applied definition and is typically used to describe any equity that is not quoted on a recognised stock exchange. Hedge funds, for example, have some similarities to private equity, but there are clear organisational and strategic differences that set them apart – see chapter 5, section 11 on hedge funds.

The private equity market has two distinct components: venture capital (VC), which is targeted at new and early-stage companies; and development capital and buy-outs, which is targeted at mature businesses.

The most common investment strategies in private equity are **leveraged buyouts (LBOs)**, VC, growth capital, distressed investments and mezzanine capital.

3.3.1 Leveraged Buy-outs (LBOs)

Leveraged buyouts (LBOs) involve a financial sponsor agreeing to an acquisition without itself committing all the capital required for the acquisition. To do this, the financial sponsor will raise acquisition debt which ultimately looks to the cash flows of the acquisition target to make interest and principal payments. Acquisition debt in an LBO is often non-recourse to the financial sponsor and has no claim on other investment managed by the financial sponsor.

Therefore, an LBO transaction's financial structure is particularly attractive to a fund's limited partners, allowing them the benefits of leverage, but greatly limiting the degree of recourse of that leverage. This kind of financing structure leverage benefits an LBO's financial sponsor in two ways: the investor itself only needs to provide a fraction of the capital for the acquisition, and the returns to the investor will be enhanced (provided the return on assets exceeds the cost of the debt).

3.3.2 Venture Capital (VC)

Venture capital (VC) is a broad subcategory of private equity that refers to equity investments made – typically in less mature companies – for the launch, early development or expansion of a business. It is most often found in the application of new technology, new marketing concepts and new products that have yet to be proven.

It is often subdivided by the stage of development of the company, ranging from early-stage capital used for the launch of start-up companies to late stage and growth capital that is often used to fund expansion of existing business (see section 3.3.3).

Entrepreneurs often develop products and ideas that require substantial capital during the formative stages of their companies' life-cycles. Many entrepreneurs do not have sufficient funds to finance projects themselves, so they must seek outside financing. The venture capitalist's need to deliver high returns to compensate for the risk of these investments makes venture funding an expensive capital source for companies. VC is most suitable for businesses with large upfront capital requirements which cannot be financed by cheaper alternatives such as debt. Although VC is often most closely associated with fast-growing technology and biotechnology fields, it has also been used for other more traditional businesses, such as manufacturing and retail.

3.3.3 Growth Capital

Growth capital refers to equity investments, most often minority investments, in relatively mature companies that are looking for capital to expand or restructure operations, enter new markets or finance a major acquisition without a change of control of the business. Companies that seek growth capital will often do so in order to finance a transformational event in their life-cycle.

These companies are likely to be more mature than VC-funded companies, able to generate revenue and operating profits, but unable to generate sufficient cash to fund major expansions, acquisitions or other investments. The primary owner of the company may not be willing to take the financial risk alone. By selling part of the company to private equity, the owner can take out some value and share the risk of growth with partners.

3.3.4 Distressed Investments

Distressed (also called turnaround, recovery or special situation) investment is a broad category referring to investments in the equity or debt securities of financially stressed companies; for example, those experiencing financial or operational distress, default, or those which are bankrupt. This market was developed in the 1980s and early 1990s when the number of large public companies in financial distress increased – commercial banks sold their non-performing corporate loans at a discount to par to investors who took a view on recovery values. While distressed debt investment can yield high returns, it does also carry significant risks as bankruptcy could render the securities worthless.

3.3.5 Mezzanine Capital

Mezzanine capital refers to subordinated debt or preferred equity securities that often represent the most junior portion of a company's capital structure that is senior to the company's common equity. This form of financing is often used by private equity investors to reduce the amount of equity capital required to finance a leveraged buy-out or major expansion. Mezzanine capital, which is often used by smaller companies that are unable to access the high-yield market, allows such companies to borrow additional capital beyond the levels that traditional lenders are willing to provide through bank loans. In compensation for the increased risk, mezzanine debtholders require a higher return for their investment than secured or other more senior lenders.

One type of mezzanine capital is bridge financing. This is an interim financing option used by companies and other entities to solidify their short-term position (typically for six to 12 months) until a long-term financing option can be arranged. Bridge financing normally comes from an investment bank or VC firm in the form of a loan or equity investment. Due to the short-term nature of bridge financing, it is traditionally more expensive than longer-term financing options.

3.4 Investment Risk and Shares

Learning Objective

1.4.3 Analyse the main sources of investment risk and return associated with equities: capital return; dividends; liquidity; credit ratings; corporate actions; company liquidation; activist shareholders

3.4.1 Characteristics, Risks and Performance

Investors generally hold shares in the hope of generating a return on them. However, the pursuit of these returns is not without its risks. These risks can affect:

- **the capital that the investor has tied up** – the share price may fall, or fail to rise in line with inflation or with the performance of other, less risky investments, and
- **their income** – if the company is not as profitable as hoped, the dividends it pays may not keep pace with inflation; indeed, they may fall or even not be paid at all (called 'passing a dividend').

The past performance of shares can be assessed through reference to the movement in the price of the actual share, and the amount and frequency of the dividend payment. Always remember that past performance is not an indicator of future performance.

In the following sections, we will consider various factors that can affect the riskiness of investment in shares and their performance including liquidity, growth, volatility and issuing institutions. These factors can combine to affect the risk attached to shares.

3.4.2 Liquidity

In addition to other risks, investors have to consider whether those shares can actually be traded (regardless of how the company has performed or whether its shares have risen in value). Remember from section 1.1 that liquidity is the ease and speed with which an investment can be turned into cash.

For most liquid shares, orders can be quickly executed via SETS at prevailing market prices. For example, blue-chip shares (referring to the shares of the most nationally recognised, well-established and financially sound companies with large capitalisations) are more heavily traded than smaller stocks. This means there will generally be a number of market makers willing to set both bid and offer prices for blue-chip shares, and more potential buyers and sellers; in other words, there is a deep and liquid market for them. By contrast, smaller company shares can be less liquid, which means they are traded less regularly.

Private companies (whose shares are not listed on a recognised stock exchange) and other less liquid shares, as well as very large deals outside normal market size, may be very difficult to deal in. The broker may only have one or two market makers to choose from (if at all), in which case there may be a considerable delay before a matching buyer can be found. These securities could, therefore, be termed 'illiquid'.

Further, there may be conditions in the company's constitutional documents (its memorandum and articles of association), which mean investors wanting to sell their shares must first offer them to their co-shareholders or restrict their ability to sell at an acceptable price. This is in addition to the difficulty in actually determining what is a fair price since there is no market mechanism to set this.

Even shares which are listed may be illiquid and hard to deal in: some listed shares are not actively quoted and may be dealt in very infrequently. It may be difficult for a broker to find a willing buyer/seller and then only at a price that is unattractive to the investor – this occurred during the global financial crisis, for example.

For this reason, investors who are considering investing in the shares of private companies, or those which have small issues or are infrequent dealers, should ensure that they can afford to run the risk of being unable to unload their holding promptly, or at what they see as a current fair market price.

3.4.3 Credit Rating

Credit ratings assess a company's creditworthiness, which measures the likelihood of the company defaulting on its debts. Thus, credit ratings can provide investors with an indication of a company's health and prospects and, therefore, whether it will continue operating in the future. See section 1.10.3 on credit ratings.

3.4.4 Returns: Capital Growth and Income

Many investors' objective in buying shares is to secure capital growth through appreciation in the share price. Those who invest for income usually also hope for this to grow too, so that their income keeps pace with inflation. However, investing for growth involves risk. Will the investor's shares rise (or fall) in price, and will the company make enough profits to pay steady and rising dividends?

As covered in section 3.2.1:

- Share prices may fall as well as rise, and an investor who has to sell their shares at that point may make a loss. Thus, shares are really only appropriate for people who can stand the risk of some loss and are able to tie their money up for the long term (ie, five years or more).
- If a company is wound up, ordinary shareholders are the last in line for any pay-out, so there might not be enough money left to give them a pay-out at all.
- Ordinary shareholders also rank last for any surplus remaining after liquidation of the company.
- While shareholders are entitled to share equally in any dividend distributions, the company is under no legal obligation to make any such distributions.

Shareholders are rewarded for taking on this level of risk via capital gains if the company performs very well.

3.5 Corporate Actions

3.5.1 The Impact of Corporate Actions

'Corporate actions' is the collective term for a range of actions that a company can take which affect the holdings, benefits or rights of its shareholders. Many corporate actions have a direct impact on the number and/or value of shares in issue. Some of the more common corporate actions are **bonus issues**, share splits and rights issues. Dividend payments are also technically corporate actions as they represent the distribution of profits to shareholders, but they are often considered separately due to their recurring nature and distinct characteristics; the impact of dividend payments on share price is discussed in section 3.6.5.

3.5.2 Bonus/Scrip/Capitalisation Issues

Sometimes, companies which have their shares listed on the stock exchange want to increase the number of shares in issue without raising new money. One way to achieve this is by issuing new shares and allocating them to existing holders.

Companies may choose to do this for several reasons: it can help to simplify and streamline their statement of financial position, and having more shares in issue can also improve their marketability. We will explore both those reasons in more detail shortly, but first let us consider how this works in practice.

If company ABC plc has a bonus issue (also called a scrip or capitalisation issue), the number of its shares in issue will increase, but, as we have said, no new capital will be raised. Instead, the new shares are allocated to existing shareholders, on a *pro rata* basis (a Latin term meaning 'in proportion'), thus shareholders will receive new shares in proportion to the shares they already own.

For example, a 5-for-2 bonus issue means that an investor receives five new shares for every two shares they hold in a company. So, an investor that owns 200 shares will end up with 200 + 500 = 700 shares in total.

Bonus issues also impact on a company's financial statements. Some of the company's reserves (eg, its share premium account, revaluation reserves and retained earnings) are converted into share capital, thereby increasing the number of shares in issue. This process can help to simplify the company's statement of financial position.

The following 'before' and 'after' example shows what the effect of a 1-for-4 bonus issue could be:

	Before cap issue	After cap issue
	£	£
Ordinary shares	200,000	250,000
Share premium reserve account	60,000	10,000
Reserves	140,000	140,000
Net worth (net assets)	400,000	400,000
Number of ordinary shares	400,000 of Ord 50p	500,000 of Ord 50p

Overall, the statement of financial position is neither stronger nor weaker than it was before because the total net worth (that is, the **net assets**) is still exactly the same. All that has happened is there has been a change in the way the shareholders' funds are shown.

The price of the shares in the market after the bonus issue (the ex-cap price) will, all things being equal, fall in direct proportion to the increase in share capital. In our example, if the company's shares were priced at 250p each before the bonus issue, you could expect to see them fall to 200p:

400,000 shares x 250p are worth	£1,000,000
100,000 shares are issued free	nil
Thus 500,000 shares are now worth	£1,000,000 + 0 = £1,000,000 or 200p per share

However, certain market factors might also affect the ex-cap price of the shares:

- The lower price per share might make the shares more marketable, as they are now more accessible to a broader range of investors.
- Bonus issues are normally seen as a sign that a company is successful, since it indicates that there are plenty of reserves (such as undistributed profits) to reallocate.

These factors may combine to encourage more investors to want to buy the shares, so the price may rise a little above the expected value.

When a bonus issue has been made, the existing shareholders will each receive a renounceable certificate which shows the number of shares to which they are entitled. If a shareholder wants to sell any of them, all they have to do is sign the reverse. There is no need to also complete a share transfer form (as there normally would be).

3.5.3 Share Splits (also known as Stock Splits)

Share splits occur when a company reduces the nominal (par) value per share of its issued share capital, without altering the value of its total nominal share capital (contrast this with what we have seen with bonus issues in section 3.5.2).

In theory, the effect of a share split on the market price may be the same as for a bonus issue. However, increased marketability may again cause the share price to settle above the theoretical price.

3.5.4 Rights Issues

Very often, a company will need to raise more capital once it is already up and running. It might want to do this in order to pay off existing borrowings, (especially if they are at interest rates that look high in comparison with current market rates), support fund expansion, or acquire funding to make new acquisitions (ie, take over other companies).

A company might raise this money by borrowing from a bank or by issuing a bond, but this could be expensive if interest rates are high or the company already has heavy borrowings.

An alternative is for it to ask its existing shareholders to invest more money in the company, by participating in a rights issue. In other words, the shareholders are asked to subscribe for (and pay for) a new tranche of shares.

The term 'rights issue' is used because the existing shareholders have a statutory (ie, legal) right to subscribe for these new shares if they choose to. This protects them from having their interest in the company diluted by other, new shareholders. However, they do not have to take up these rights if they do not want to.

The main features of a rights issue includes the following:

- New shares carry the same rights (eg, for dividends or votes) as the old shares already in issue. That is, they are described as ranking *pari passu* with the old shares.
- The price to be paid for the new shares (ie, the subscription price) will be below the current market value of the old shares.
- The number of new shares on offer to existing shareholders will depend on the terms of the issue and how much money the company is trying to raise; it is expressed as 'x' number of new shares, for every 'y' number currently held (eg, a 1-for-4 rights issue).

For example, a 4-for-7 rights issue enables all existing shareholders to buy four new shares in the company for every seven that they already own. As before, the figures can be whatever the company wants.

Companies will often arrange to have their rights issue underwritten by an appropriate financial institution, so as to ensure that the issue is successful. In the context of a rights issue, underwriting is a process whereby a specialist financial service organisation (usually a merchant bank, stockbroking house or similar) promises to take up any shares that the existing shareholders do not choose to take up themselves. The issuing company is thus assured that if the issue is badly received (perhaps because of unexpected or unfavourable conditions in the market), then it has not gone to all the expense of arranging the issue only for it to fail to raise any new money. For a fee, the underwriting house undertakes to take up the unwanted new shares at a set price. It will then hold these shares in its own name and will try to sell them in the market (preferably for a profit when conditions improve). The underwriting fee is due to it whether or not the issue is successful. Therefore, underwriting can be likened to an insurance policy.

We can calculate the expected market price of the company's old and new shares after the rights issue. Known as the theoretical ex-rights price (TERP), this represents the price at which we would expect both old and new shares to start trading at, once the rights issue has been completed and the new shares are fully paid (ie, the investors have paid for the ones they want to take up).

Example

An investor holds 40 shares in ABC ltd, at a current market price of ¥450 each. Thus, the total value of their holding is ¥18,000.

There is a rights issue at ¥300 on a 1-for-2 basis. Thus, the investor can expect rights to 20 new shares to be allocated.

After taking up the rights (20 new shares at ¥300 each), the investor now owns 60 shares, with a total cost value of ¥24,000. This is calculated as follows:

	¥18,000	cost of original shares
plus	¥6,000	cost of new shares
=	¥24,000	

¥24,000 divided by the number of shares the investor now owns (ie, 60) is ¥400, which is the TERP.

This tells us that we can expect:

- the price of the old shares to fall from ¥450 to ¥400, and
- the price of the new shares to rise when they start trading, from ¥300 to ¥400.

The investor will receive a provisional letter of allotment detailing the extra shares they are entitled to receive in accordance with the terms of the rights issue. The letter will advise the investor of the deadline for making a decision; this is usually two or three weeks after it is issued. It will also set out the timetable of events (for example, when any payment will have to be made by).

The investor must then consider whether they want to take up the allotment in full, sell the rights, split the allotment so that part can be sold to raise money to take up the balance, or let the rights lapse.

Many investors take professional advice before deciding on what action to take (for example, from their stockbroker). Factors to take into consideration are:

- the terms of the rights issue
- what the company plans to do with the money (ie, the reason for the issue, and what market sentiment is towards it)
- how the company has been performing to date, and
- how the share price has been performing, and what effect the rights issue is expected to have on it in the near term.

We can contrast the effects of a bonus issue and a rights issue as follows:

Bonus Issues	Rights Issues
Raise no new money for the company. Increase the number of shares in issue. Result in a lower share price which may also make the shares more marketable.	Raise new money for the company. May be used to finance specific activities such as expansion, financing the acquisition of another company (a takeover), or paying off existing debt. Increase the number of shares in issue, providing it is successful or is underwritten. Are made at a price below the current market price of the company's shares.

3.5.5 Liquidation

When a company ceases trading, it is generally wound up – in other words, it is put into liquidation, and then ultimately dissolved. Part of this process involves turning its assets into cash, so that its debts can be paid off and the surplus paid out to its shareholders. In some rare cases, the shareholders are given assets instead of cash.

Depending on the reasons for the winding-up, the company may have enough money to repay its debts (ie, solvent) – or it may not. If there is not enough money, it is referred to as being insolvent.

On liquidation and winding up, there is a strict order of priority as to how the assets are distributed. Those first in the order of priority (ie, certain creditors) are clearly much more likely to get a full pay-out.

Looking purely at the order in which investors in a company are repaid, with the higher priorities first, it is as follows:

- Secured bondholders and debenture holders.
- Unsecured bondholders.
- Preference shareholders.
- Ordinary shareholders.

Within these broad categories, there can be some further subdivisions. For example, there can be different levels of seniority of debt, which determines which of a company's several issues takes precedence in the event there is not enough to repay all of the issues.

An announcement that a company is going into liquidation will invariably have some effect on its share price; it is, after all, as major an event as the company can undergo. The market's reaction will depend on whether the company is solvent or insolvent, and whether the liquidation is:

- **voluntary** – because the company has carried out the activity it was set up for and is now ready to pay out the proceeds to its owners, or

- **involuntary** – perhaps because the company is insolvent, and its creditors have petitioned the court for it to be wound up.

In cases where a company is insolvent and an order is made for its winding-up, its shares (if they are listed) are likely to have been suspended by the market on which they trade, so investors may find they are 'locked in' to their holdings and cannot sell even if they wanted to.

3.5.6 Shareholder Engagement and Shareholder Activism

Sometimes, shareholders use their equity stake in a corporation to engage with and put pressure on its management to achieve specific goals or to make improvements in their practices. These goals may be financial (eg, increased value for the shareholder through restructuring or cost savings) or non-financial (eg, encouraging behavioural change to address serious environmental or social issues). These engagements may take the form of shareholder resolutions, proxy battles, publicity campaigns, litigation and negotiation, as well as formal dialogue and/or collaboration with management.

While shareholder engagement and shareholder activism are very similar in that they both involve shareholders using their rights to bring about change within a corporation, there are clear distinctions between them. For example, shareholder engagement is a long-term strategy that relies heavily on communication and mutual trust between stakeholders, whereas shareholder activism favours short-term gains at the expense of long-term interests.

The world's largest activist investors each manage billions of dollars of assets. While they may not necessarily be household names, the firms that they target often are. In 2024, according to the Bloomberg Global Activism League Tables[22], 18.5% of companies in the top 1% of the Russell 3000 (a broad equity index composed of the 3,000 largest US-listed stocks) were targeted by activists.

3.6 Dealing in Shares and Share Prices

Learning Objective

1.4.4 Understand how equity securities are traded and settled: market participants; liquidity, pricing and fair value; nominal value; market price; cum- and ex-dividend; transaction costs and charges

3.6.1 Factors Affecting Share Prices

Most investors who buy equity-based products are familiar with warnings such as:

> '*the price of shares can fall as well as rise, and you may get back less than the amount you originally invested*'.

22 Bloomberg Professional Services, January 2025. Bloomberg Global Activism League Tables, FY 2024. Retrieved from https://www.sidley.com/en/-/media/publications/bloomberg-activism-league-tables-fy2024.pdf?la=en (Accessed: February 2025)

Such warnings are required by the regulators, and serve to remind investors that their capital is at risk when they invest in the stock markets.

Memorable stock market crashes, in which share prices fell dramatically and when many investors lost significant proportions of their savings, include the 1987 crash, the dot-com bubble of the late 1990s, the global financial crisis of 2007–08, the European sovereign debt crisis of 2011, the market corrections of 2016 and 2018, the onset of the COVID-19 pandemic in 2020, and the global energy crisis of 2022.

Equity prices have always been volatile, mainly because:

- all things being equal, the value of a share should reflect how well a company is doing. This can vary tremendously, depending on the management's skill, the economic environment, and often a degree of luck, and
- share prices are driven by supply and demand. If people feel optimistic about a share, or about the stock market or economy as a whole, there will be more buyers than sellers and the price will rise. Conversely, if they are pessimistic, the price will fall.

Even companies that are regarded as stable, well-run and unlikely to suffer badly in an economic downturn (the so-called 'blue-chip' stocks) have been known to fall significantly in value and occasionally to become insolvent. It is this uncertainty that investors have to bear in mind when they are considering buying equities for their long-term growth prospects.

One of the main factors that can affect share prices is supply and demand.

In most cases, the number of shares in issue is fixed, and the supply of shares must come from people willing to sell their existing holdings (however, as explained in section 3.5, certain types of corporate actions can also affect supply).

If there are more investors keen to sell their shares than there are new investors looking to buy (ie, supply is higher than demand), the price of the shares will fall; if the converse is true, they will rise.

The appetite of investors to buy or sell a company's shares will depend on a range of factors, including:

- strong (or weak) financial results, or indeed expectations of results
- recommendations from stockbrokers to buy/sell a given stock
- rumours that a company may be the subject of a takeover bid or merger
- the skill (or otherwise) of the management team
- the political climate, since government policy can make life harder for some types of company
- the economic climate including factors such as interest rates, inflation and exchange rates
- the price movements on other world stock markets, which can affect global sentiment
- whether investors have funds available to commit to the markets, and
- buying and selling activity on the part of large institutions.

3.6.2 Market Participants

Stock market participants range from small individuals (retail investors) to large institutions (institutional investors) such as banks, insurance companies, pension funds, mutual funds and hedge funds. Other major participants include publicly traded corporations, who can also trade in their own shares, and robo-advisors (ie, digital platforms providing financial and investment advice with little human interaction, if at all).

The main reason that investors buy equities is to make money, whether in the form of capital growth or income. The most basic principle in investing is 'buy low, sell high', although this is difficult to execute in practice as it is hard (if not impossible) to predict when share prices are high or low enough. The amount of money made depends on the performance of the shares or markets invested in.

3.6.3 Share Dealing

Listed shares and, often, unlisted shares too are bought and sold through a stockbroker. The broker can deal for the client in one of three ways:

- **Discretionary service** – the client gives a firm or broker discretion to manage a portfolio on their behalf on a professional basis; in other words, the firm or broker does not have to refer to the client before dealing. Clients may wish to use this type of service if they are too busy or not experienced enough to look after their own investments and prefer to use the investment experience of a firm providing these services.
- **Non-discretionary service** – there are two types of non-discretionary services:
    - **Advisory** – clients rely on the firm for professional and independent advice on investment decisions, but the client makes the final decision to deal. Clients can deal in a wide range of investments and the firm will aim to build up a long-term relationship with them.
    - **Execution-only** – no advice is given to the client and the firm simply undertakes the transaction. In such cases, the transaction is carried out on the instructions of the client and no advice is provided about the suitability or appropriateness of the investment. In some regions/countries such as the EU, stockbrokers may have to request information from clients (or potential clients) on their knowledge and experience, in order to assess whether the execution-only service is appropriate.

Instructions to buy or sell shares are sent to a stockbroker, who will then place the orders. These orders will typically go through a stock exchange (also called securities exchanges or bourses) which provide a platform on which buyers and sellers of the same security can be matched. The process of matching buyers and sellers used to be done manually (based on an open outcry system where traders used verbal and hand signals to transfer information), but today this is often carried out through computerised trading systems (ie, electronic trading). The world's largest stock exchanges include the New York Stock Exchange (NYSE) and **Nasdaq** in the US, Japan's Tokyo Stock Exchange (TSE), China's Shanghai Stock Exchange (SSE), and Euronext in Europe.

Market Makers and Brokers

Two of the most important parts of the financial markets are market makers and brokers:

- **Brokers** act as their clients' agent. They place deals with the market makers in those securities their clients wish to deal in, at the best possible price (the principle of best execution).
- **Market makers** are a type of stock exchange member firm who promise to give buy and sell prices in a given range of securities, so that there is always a market in those securities (hence their name); most stock exchanges employ market makers to provide liquidity. Market makers are in competition with each other for business and the broker will choose the best price offered when executing the client's order while taking into account a range of factors.

Some firms are allowed to act in dual capacity as market maker and broker, and many large banks do just that.

Different stock exchanges worldwide have different systems to facilitate trading. What can make matters even more complicated is that the same stock exchange can have multiple systems for trading in different securities, depending largely on the level of liquidity of those securities.

In the UK, for example, brokers placing deals will generally use one of the following systems:

- The **Stock Exchange Electronic Trading System (SETS)** is the single platform, with an electronic order book, trading constituents of the **FTSE All-Share Index,** ETFs and exchange-traded commodities, along with over 150 of the most traded **AIM** and Irish securities. SETS offers market making in all stocks, including those deemed to be liquid under MiFID.
- **SETS** is an order-driven system: investors submit orders to the SETS system via stockbrokers (who are LSE member firms); the information is transmitted electronically, and orders are automatically executed if possible. SETS sends out information (orders, transactions, other messages) via a broadcast public feed.
- **SETqx** (Stock Exchange Electronic Trading Service-quotes and crosses) is a trading service for securities that are less liquid than those on the SETS service.
- The Stock Exchange Automated Quotation (SEAQ) system is a non-electronically executable quotation service. Unlike SETS, it is a quoted-driven system that allows market makers to quote prices for trading the fixed-interest market and AIM-listed shares not traded on SETS.

The International Order Book (IOB) is a service which enables investors to tap into some of the world's fastest growing markets through a single electronic order book. It offers cost-effective access to securities via depositary receipts (DRs) from over 30 countries, including those in Central and Eastern Europe, Asia and the Middle East, and has a similar order of functionality as the SETS.

When trades are carried out, there must be a mechanism for updating the registered to reflect the buyer and effect the change of ownership, and for transferring money to the seller. This is required in order to settle the transaction – accordingly, it is described as settlement. Settlement represents the exchange of a security and its payment. In most financial markets, few participants actually hold physical securities for the publicly-traded securities that they own. Rather, ownership is tracked electronically through a book-entry system maintained by a central securities depository (CSD). At the depository, ownership transfer occurs on the system's records at settlement.

The CSD for markets in the UK and for Irish stocks is CREST (Certificateless Registry for Electronic Share Transfer). The system also allows settlement of a broad spectrum of securities including bonds and international stocks. CREST will then issue a CREST depository interest (CDI) to each holder of the security, which is then transferred into the CREST system.

The standard market convention is for equity trades to settle on a two-day settlement period (T+2). This means that the sale proceeds/purchase costs and the stock, must change hands within two business days of the deal date. Settlement can be reduced to T+1 or delayed beyond T+2 (up to a maximum of 20 days after the date of the trade) by agreement between the parties. A delay is commonly seen if private investors sell shares in certificated form: a stock transfer form must be completed and deposited along with the paper share certificate, which takes much longer, hence the need for a longer settlement period. The settlement for rights issues is T+1.

On a global scale, the trend for shorter settlement cycles is expected to continue in line with international best practices. The benefits include reduced counterparty credit risk and related costs, improved operational processes, and increased market liquidity. Some jurisdictions (eg, the US, Canada, Mexico and Argentina) went live with T+1 settlement in 2024, which could trigger a wave of other markets to follow suit; however, there is still some way to go before T+1 (or even T+0) settlement is more widely adopted. For example, securities markets would need higher levels of automated processing, as well as other investment infrastructure, to support these shorter cycles.

3.6.4 Nominal Value and Market Price

The number of shares that a company issues is determined by the:

- amount of share capital which is being raised, and
- nominal (or par, or intrinsic) value of the shares.

For example, ABC company may aim to raise $500,000 (to invest in expanding its operations and investing in new premises and machinery). It could do so by issuing:

- 500,000 ordinary shares with a nominal value (NV) of $1 each, or
- 1,000,000 shares, each with a NV of $0.50, to raise the same amount of capital.

By making more shares available to potential shareholders, their marketability may be improved, so the latter option may suit some companies more than others.

It is quite possible for companies to sell their shares when they are initially issued for more than the stated NV. For example, a company may issue 100,000 ordinary shares of €1 NV, launching them into the market for €1.30. The additional €0.30 is known as a premium (ie, the excess price per share that the company raises, over and above the NV of those shares).

The NV of a share is usually shown in its name. For example, an investor might own a 1,000 x £1 ordinary shares in XYZ plc, but the shares might be trading at £2.30 each on the stock market. Thus, the value of their holding would be £2.30 x 1,000 = £2,300.

We can also talk about the total **market capitalisation** of a company, by reference to the total number of shares in issue, multiplied by its current share price. If XYZ plc has 1 million shares in issue, then its total market capitalisation is: £2.3 million (ie, 1 million x £2.30).

Companies may also issue shares of no par value (NPV), which is distinct from the share's title for example, 'ABC Ordinary Shares NPV'. The absence of a par value does not imply that NPV shares have no nominal value; rather, their value is determined by the market forces of supply and demand.

Remember that the price of a share in the market needs bear no relation to their NV. Also, an investor will be more interested in what the market value of their shares is rather than its NV. As we saw in section 3.6.1, share prices are determined by supply and demand, based on various factors such as company performance, market sentiment and economic environment.

3.6.5 Fair Value

One method of calculating the fair value of a share is to use the Gordon growth model. Also called the dividend valuation model, this is a simple method of deriving a share valuation or price from a future series of the current dividends, expected dividend growth, and return required.

The formula for calculating the share valuation using this approach is as follows:

$$\text{Share Price} = \text{Dividend} / (\text{Return required} - \text{Dividend growth})$$

Example

A US company is expected to pay a dividend next year of $0.20. The required rate of return is 10% and the expected dividend growth is 5%. Thus, the valuation is:

$$\text{Share price} = \$0.20 / (0.10 - 0.05) = \$4$$

A question then arises: if the value of a share is based on the net present value (NPV) of its future dividends, how does a company that does not pay any dividends command a high stock market valuation?

The suggestion is that investors look ahead to the prospect that the company will be paying significant dividends at some stage in the future. In the cases of Microsoft and Apple, for example, during many years of reinvesting their earnings into their respective businesses, they were able to reach commanding positions in the market and thereby enhance their ability to generate eventual future dividends. Microsoft has been paying a dividend since 2003 and Apple since 2012, albeit small in terms of **dividend yield**.

3.6.6 Cum- and Ex-Dividend Prices

Dividends have many dates associated with them and some of them have multiple names.

Declaration Date

The declaration date is the date that the company's board of directors announces the company will pay a specified dividend to its shareholders on a specified future date. It is the day on which the dividend goes on the company's financial statements as a liability that must be paid. The declaration must occur at least three clear business days before the ex-dividend date (see below).

Ex-Dividend (xd) Date

The xd date is the date by which investors must have purchased the stock to receive the dividend. It is determined by the stock exchange and in accordance with guidance issued by the exchange in its dividend procedure timetable. Note that the xd date is different from the record date (see below) because it takes two to three days for an investor to be officially recognised as a shareholder.

After the xd date, anyone who purchases the shares is not entitled to receive the dividend. The company's share price will be quoted with the letters 'xd' after it, to indicate that anyone buying the shares after this point will not be eligible to receive the next dividend. Typically, the share price decreases by the dividend amount because a new investor will not receive the payment.

Record Date (or Books Closed Date)

This is the day by which an investor must be registered as an owner of the shares to receive the dividend. On this day, a record is taken of all the owners of the company and how many shares they own so that the company knows who to pay the dividend to on the payment date. As it takes time for an investor to become registered as a shareholder, this is not the last day to buy the shares.

Dividend Payment Date

The dividend payment date (or, simply, payment date) is the day on which an investor receives their dividend. This date is usually about three weeks after the record date.

The period from the ex-dividend date up to the payment date is known as the ex-dividend period (or xd period). Throughout this period, the shares trade without entitlement to the next dividend.

A share that is not ex-dividend is described as cum-dividend (or cum-div, or cd) – in other words, the buyer buys the shares with the right to the next dividend to be declared. Shares are assumed to be cum-dividend unless otherwise indicated.

During the ex-dividend period, it is possible to arrange a special cum trade – this is where, by special arrangement, the buyer of the share during the ex-dividend period does not receive the next dividend. These trades can be done up to and including the day before the dividend payment date, but not on or after the dividend payment date. Similarly, an investor can arrange a special ex trade, whereby an investor who buys a share during the cum-dividend period will not receive the next dividend – this is only possible to arrange in the ten business days before the ex-date. The motivations for investors making special cum or ex trades tend to be related to income tax.

3.6.7 Transaction Costs and Charges

The direct purchase and sale of equities involve a variety of costs.

Broker Commission

When buying and selling shares, in addition to the cost of the shares, an investor pays a fee charged by the broker that makes the transaction, (ie, broker commission).

This commission varies from broker to broker, and is either a:

- percentage of the total purchase price (typically between 1% and 2%)
- flat fee or a nominal rate per share, or
- combination of the two.

Example

An investor purchases €1,000 worth of shares through their broker, who charges a fee of 1.5% of the total purchase price with a minimum commission of €25.

The commission is 1.5% x €1,000 = €15. As this commission rate is lower than the minimum, the broker charges a flat fee of €25, bringing the total purchase price to $1,025.

Stamp Duty and Stamp Duty Reserve Tax (SDRT)

In some countries, **stamp duty** or **stamp duty reserve tax (SDRT)** is also charged on the purchase of shares. This is covered in more detail in chapter 4, section 8.

Panel of Takeovers and Mergers (PTM) Levy

Trades in securities of companies that are incorporated in the UK, the Channel Islands or the Isle of Man are subject to the Panel of Takeovers and Mergers (PTM) levy. The PTM levy is a £1 government levy that is automatically charged to investors when they buy or sell securities on the **London Stock Exchange (LSE)**, and which are over £10,000 in value.

3.7 Equity Indices

Learning Objective

1.4.5 Understand the purpose and construction of the main equity indices, and the considerations needed for less liquid markets

Stock market indices may be classed in many ways based on factors such as geographical scope, sector focus, market capitalisation, and the methodology used to calculate the index.

A world or global stock market index includes companies without regard for where they are domiciled or traded. Notable examples include the MSCI World (covering large and mid-cap stocks across 23 developed market countries), MSCI ACWI (representing large and mid-cap stocks across almost 50 developed and emerging market countries) and the S&P Global 100 (which measures the performance of multinational, blue chip companies of major importance in the global equity markets). While these indices typically focus on larger companies, small-cap indices also exist, such as the MSCI World Small Cap Index.

A national index represents the performance of the stock market of a particular nation, and can reflect investor sentiment on the state of its economy. The most regularly quoted market indices are composed of the stocks of large companies, listed on a nation's largest stock exchanges, such as the US S&P 500, the UK's **FTSE 100**, China's SSE Composite Index, and Japan's Nikkei 225. However, it should be noted that, in some cases (such as the FTSE 100), the index may contain a substantial number of foreign or multinational companies, so may not be representative of the national economy; in such cases, it is usual to look at the next level of indices (eg, the FTSE 250) as a key barometer of economic health and investor sentiment.

The concept may be extended well beyond an exchange. The Dow Jones US Total Stock Market Index, as its name implies, represents the stocks of nearly every publicly traded company in the US, including all US stocks traded on the NYSE (but not American depositary receipts (ADRs)) and most of those traded on Nasdaq.

Specialised indices exist that track the performance of specific sectors of the market. The MSCI World Pharmaceuticals, Biotechnology and Life Sciences Index, for example, consists of about 70 firms worldwide in the pharmaceutical, biotechnology and life sciences industries. Other indices may track companies of a certain size, a certain type of management, or even more specialised criteria.

Some indices, such as the S&P 500, have multiple versions. These versions can differ based on how the index components are weighted and on how dividends are accounted for. In the case of the S&P 500, there are three versions of index:

- price return (which only considers the price of the components)
- total return (which accounts for dividend reinvestment), and
- net total return (which accounts for dividend reinvestment after the deduction of a withholding tax).

An index may also be classified according to the method used to determine its price:

Index Type	Description
Price-weighted (or share-weighted)	The index is constructed on the assumption that an equal number of shares are held in each of the constituents. However, as these equal holdings are weighted according to each constituent's share price, those with a high share price (relative to that of other constituents) have a greater influence on the index value. The index is calculated by summing the total of each constituent's share price and comparing this total to that of the base period. The most famous price-weighted index is the Dow Jones Industrial Average (DJIA).
Market capitalisation-weighted (or market cap- or market value-weighted)	The index factors in the size of the company. Thus, larger companies account for proportionately more of the index as they are weighted according to each company's market capitalisation, so a small shift in their share prices will heavily influence the value of the index. Most of the world's major indices are market capitalisation-weighted such as the FTSE 100, S&P 500 and the Hang Seng Index.
Equal-weighted (or unweighted)	The index assumes that equal amounts are invested in each share in the index. This can be useful when the largest companies comprise a disproportionately large weighting in the index; therefore, an index constructed on a market-capitalisation basis can give a misleading impression. The MSCI USA Equal Weighted Index is an example of an equal-weighted index.
Float-adjusted	Only the freely tradable portion of shares are taken into consideration (ie, the free float).

Some indices are capped. A capped index is one which sets a limit on the weighting to any particular stock or sector – eg, MSCI FM15% Country Capped Index limits the exposure to any single frontiers market to 15% of the index at each quarterly rebalance.

Indices can also incorporate free float, meaning that they exclude shares held by strategic investors or government holdings in large, privatised companies. In certain cases, overseas companies may restrict the number of shares available to non-resident investors. Free float indices adjust weightings in their indices according to the free float; this makes the indices more useful as a measurement of performance since it reflects more closely what fund managers can actually buy.

Traditionally, indices were either price or market cap-weighted indices, with all outstanding shares included. However, many have changed to a float-adjusted weighting for a more accurate representation of market values.

Remember that the constituents of an index change over time. The FTSE 100, for example, is reviewed every quarter – at these times, some companies may enter and others may exit the index, which impacts on share prices. These updates, or rebalances as they are also called, result in busy trading days – in particular, for index fund managers who must reconfigure their portfolio holdings to match the new rebalanced index in order to continue to achieve their index-tracking objectives.

3.8 Selecting Equities and Equity Funds

Learning Objective

1.4.7 Analyse the factors to take into account when selecting equities and equity funds: active equity fund strategies – growth, GARP, income, value; passive equity fund strategies – buy and hold, indexation, rebalancing; growth/dividend prospects; direct versus indirect investment; advantages and disadvantages of investing in equities and equity funds; turnover and ease of trading; equity market conditions; market capitalisation, sector, region, customised; environmental, social and governance (ESG) factors

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To select a suitable equity or equity fund for investment, you must first understand the investor's requirements in terms of income or capital growth, their risk tolerance and attitude to risk (ATR), and their need for liquidity and access. Additionally, investors may wish to avoid certain sectors such as utilities, while others may express a wish to invest in a socially responsible or ethical way.

As we saw in section 3.8, investors can use the past performance of an equity or equity fund, as well as various performance measurements, to assess the financial performance and worth of that equity or equity fund relative to its peers, and across a range of market conditions.

The fund strategy should be assessed to ensure that it matches the investor's needs (income or capital growth) using an active or **passive management** style. In the case of an actively managed equity fund, the experience of the manager and their team should also be taken into account, among other considerations. For a passively managed equity fund, the tracking error should be considered.

3.8.1 Equity Fund Strategies

In general, **active management** aims to produce a return above the index for an appropriate level of risk. Returns can vary substantially depending on market conditions and the manager's skill. In choosing active funds, close attention should be paid to the investment house offering them, its track record, the fund manager's experience, investment philosophy and process.

There are two methods of constructing portfolios using an active management technique – top-down and bottom-up – which are covered in further detail in chapter 3, section 3.7.1

In contrast, passive investors do not take any long-term views on the economic viability of investments; instead, they seek to maximise returns by minimising buying and selling. This is based on the belief that markets are quick to process new information, known as the efficient market hypothesis (EMH). The EMH is an economic and investment theory that posits all publicly available and relevant information about a particular security is reflected in the price, and this is the security's fair value. Consequently, investors are unable to gain an advantage over other investors.

Whether active or passive, managers and investors can employ a variety of investment styles in order to achieve their financial aims.

The following are examples of equity strategies:

Active Equity Strategies	Passive Equity Strategies
• **Growth investing** – focuses on companies that are able to differentiate their product/service from their industry peers so as to command a competitive advantage. This results in an ability to produce high quality and above-average earnings growth, as these earnings can be insulated from the business cycle. A growth stock can also be one that has yet to gain market prominence but has the potential to do so. • **Growth at a reasonable price (GARP) investing** – a less aggressive growth investment style where attention is centred on those companies that are perceived to offer above-average earnings growth potential that has yet to be fully factored into the share price. • **Income investing** – aims to identify companies that provide a high, steady stream of safe, reliable income. It may involve focusing on larger, mature companies as these tend to pay out their retained earnings in the form of dividends rather than reinvesting into the business. High dividend levels are prominent in certain industries, such as utility companies. However, as we saw in section 3.8.1, a high historical dividend yield is no guarantee of future dividend yield levels.	• **'Buy and hold'** – buying and holding a portfolio of securities indefinitely; or if the securities have fixed maturities, holding until maturity and then replacing with similar ones a long period of time. In the interim, only minor and infrequent adjustments are made to the portfolio. • **Indexation** (also index matching) – a variant to the buy and hold strategy. It replicates the performance of a market index, thus eliminating diversifiable risk. Indexation may be employed in several ways: ◦ **Full replication** (also duplication or complete indexation) – an investor holds all constituents of an index, weighted according to their relevant market proportions. ◦ **Stratified sampling** – holding a sample of securities from each sector within an index, which is representative of the characteristics of that index. ◦ **Factor matching** – selecting securities based on specifically chosen factors or risk characteristics (eg, sector breakdown, firm size). ◦ **Optimisation** – using sophisticated computer modelling to build a portfolio, by finding holdings that broadly mimic the characteristics of the index. ◦ **Synthetic** – involving the investor entering into swap agreements, either with one or multiple counterparties, to track the return of a benchmark index.

Active Equity Strategies	Passive Equity Strategies
• **Value investing** – seeks to identify those established companies, usually cyclical in nature, that have been ignored by the market but look set for recovery. Value investors seek to buy stocks in distressed conditions in the hope that their price will revert to their fundamental or intrinsic value, known as reversion to the mean. **Blend investing** – combines growth and value investing, thus offers the potential benefits and risks of both styles. • **Contrarian investing** – similar to value investing, but it takes a view that the market has overreacted to a particular situation, and believes a company offers better prospects in the future as a result. • **Absolute return investing** – seeks to generate positive returns in all market conditions. • **Quantitative investing** – uses computers to find predictable patterns within financial data; eg, **correlations** among assets (statistical **arbitrage** or pairs trading) or price movement patterns (trend following or mean reversion). It is, typically, employed by sophisticated, technically advanced hedge funds. • **Long/short** – a strategy generally associated with hedge funds. It involves buying long equities that are expected to increase in value and selling short equities that are expected to fall in value.	• **Rebalancing** – the weightings are periodically realigned since the optimal proportion that an investor has selected is not maintained over time. With calendar rebalancing, the weights are adjusted regularly (eg, quarterly); and with contingent rebalancing, when the weights change by a predetermined percentage.

3.8.2 Equity Diversification

Geographic and Regional Spread

A well-diversified portfolio should include exposure to different stock markets around the world. A global asset allocation will help give weighting to markets that may generate the returns that the investor is seeking, and also provide the right balance of risk and reward to meet their objectives.

Market Sectors

As well as looking at the geographical spread, an adviser or investment manager may also consider specific market sectors that they expect to outperform in a particular economic cycle; eg, banking, oil, renewable energy, pharmaceuticals, technology and telecoms.

Market Capitalisation

Consideration should also be given to the market capitalisation (or market cap) of stocks and further diversity achieved through selecting between large-cap, mid-cap, and small-cap stocks.

As we saw in section 3.6.3 above, a company's value is measured by calculating how much its shares are worth in total.

The biggest companies on a stock exchange are often known as large caps (or blue-chip shares), the smallest as small caps, and those in between as mid-caps.

Note that what constitutes a large cap (or otherwise) in one country does not necessarily align with the same criteria in another. This is discussed in more detail in chapter 3, section 2.2.4.

3.8.3 Growth and Dividend Prospects

Investors tend to buy equities for their growth and/or dividend prospects, depending on their overall objectives, attitude to risk and other circumstances.

Some of the most common ways to analyse a company's future growth prospects are P/E ratio, PEG ratio and ROE, all of which are covered in section 3.8.1 above.

In terms of a company's dividend prospects, the main way that investors can assess this is by analysing the dividend cover (see section 3.8.1) as well as:

- **Historical rate of dividend growth** – the percentage growth rate of the dividend achieved over a period of time (typically on an annual basis, although it can also be calculated quarterly or monthly).
- **Dividend pay-out ratio** – the total amount of dividends paid out to shareholders relative to the net income of a company.

3.8.4 Direct and Indirect Investment

We can see that equities have a major part to play in the investment portfolio of all investors; this can be achieved either by direct investment in shares, indirectly through investment funds, or by a combination of both.

It is unlikely, however, that a single investment fund or one individual security will meet a client's requirements. Rather, diversification across different asset classes, geographies, currencies, industries and companies helps to manage risk and reduce volatility of price movements within a portfolio (although the overall construction will take consideration of the client's objectives, risk profile and other financial needs). As an alternative to direct investment, or to complement direct holdings, investors can also utilise the wide range of equity investment funds (also called collective investment schemes) that are available. The different types of fund are covered in more detail in chapter 5.

Fund Costs

Some investment funds (eg, open-ended investment companies (OEICs) and unit trusts) make charges for undertaking the management of the fund.

The types of charges that can arise (but not necessarily always) are covered in chapter 5, section 5.1.

3.9 Advantages and Disadvantages of Investing in Equities and Equity Funds

Advantages	Disadvantages
• Equities have historically provided higher returns relative to bonds over the long term, in the form of capital gains and dividends. • Equities traditionally provide a hedge against inflation. • Investors can participate in domestic and international opportunities in a broad variety of different industries, helping to achieve a great degree of diversity and reduce risk within the portfolio. • Large-cap equities offer improved liquidity when compared to other forms of investment such as direct property or alternative investments. • Small-cap equities can offer significant upside growth potential. • Ordinary shareholders are part-owners of the company, which provides them with certain rights. • It is possible to compound dividend payments within an equity fund, thus helping investors' money to grow faster.	• Share prices fluctuate over the short term, which investors may find disconcerting. • Companies may suffer financial problems and possibly even go bust, resulting in the loss of the investor's capital. • Dividends are not guaranteed, and are subject to macroeconomic and company-specific risks. • Foreign investing involves additional risks such as political and economic uncertainty, and currency fluctuations. • Unlisted, small-cap and emerging market stocks are potentially riskier and may even prove difficult to trade in certain market conditions. • Individual equities do not compound dividend payments. • Diversification is hard to achieve unless investing in equity funds.

Ease of Trading

One benefit of holding equities directly is that they can be very easy to trade. Various stockbrokers (including well-known names) offer dealing facilities via the internet, allowing retail investors the ability to trade online at minimal cost once the account opening process has been completed.

Purchasing equity holdings indirectly (eg, through an OEIC) usually requires a little more administration. In the past, this would have involved the completion of an application form to purchase units or shares in a particular fund, which would then be submitted to the manager with a cheque for the investment amount.

Today, it is possible to open an account with a fund supermarket or platform, and buy and sell indirect equity holdings in much the same way as direct equities through a stockbroking account. This ongoing development in IT back-office systems and their integration with the internet is enabling investors even greater access to investment opportunities, reducing both cost and administration.

3.9.1 Portfolio Turnover

Portfolio turnover (or, simply, turnover) refers to the rate at which securities within a portfolio, directly or indirectly held, are bought and sold. Whether an investor holds those securities directly or indirectly, the frequency of purchase and sale transactions within the portfolio may impact on the eventual rate of return experienced by the investor, particularly if the level of trading is significant. This is a result of the costs discussed in section 3.9.4.

3.9.2 Equity Market Conditions

Global stock markets have evolved considerably since the 1600s, when the world's first stock exchange (today called Euronext Amsterdam) was established. Notable developments include access to real-time prices, the replacement of old pit-style trading floors with electronic trading systems, and the increase in globalisation, all of which have advanced the opportunities available to investors. There are also country-specific changes, such as the publication of the LSE's 'First Rule Book' (which covered issues such as trade settlement and defaults) in 1812 and the recent opening of more Chinese financial markets which traditionally have been closed to foreign investors.

The composition of those stock exchanges has also changed over the years. For example, when the FTSE 100 was launched in 1984 at 1000 points, it comprised UK-focused businesses and conglomerates. The construction of the index has changed considerably since then. Today, fewer than 30 of the original 100 remain; and the index is made up of international giants as a result of new listings, promotions from, and demotions to, other indices (eg, Marks & Spencer dropped to the FTSE 250 in 2019 before returning in 2023), mergers (eg, the acquisition of Cadbury by US-based firm Kraft in 2009) and corporate failures (eg, the collapse of construction services company Carillion in 2018). As a result, the FTSE 100 is no longer a barometer of the UK's corporate health. Rather, it is more likely to react to macroeconomic changes in the global markets.

In terms of sectors, there has been a notable increase in the number of foreign mining operators, thus illustrating how London has become the global centre for such companies looking to raise cash through capital markets. Elsewhere, it is perhaps unsurprising that the collapse of the banking sector during the global financial crisis, and persistently low interest rates over the next 15 years, has led to a reduction in the allocation to this sector from about 20% in 2007 to about 11% in December 2024[23]

23 FTSE Russell, December 2024. Factsheet: FTSE 100 Index. Retrieved from https://research.ftserussell.com/Analytics/FactSheets/Home/DownloadSingleIssue?issueName=UKX&isManual=False (Accessed: February 2025)

More generally, the global equity market has evolved substantially in recent years, with issuers developing more innovative and tailor-made products to meet investors' ongoing requirements. For example:

- **Smart Beta ETFs** – 2003 saw the launch of the first smart beta ETF. These ETFs aim to generate **alpha** (ie, excess returns above a benchmark index) by passively following that index, while also considering alternative weighting schemes (eg, volatility, liquidity, quality, value, size and/or momentum). The number of these products available to the market has ballooned of late, as investors seek low-fee alternatives to active fund management.
- **Responsible, sustainable and ethical investing** – the concept of investing in line with responsible, sustainable and ethical principles has gained traction on a global scale in recent years, resulting in the development of new strategies to address a variety of environmental, social and governance (ESG) issues (see section 3.11).
- **Robo-advisors** – an increasing number of products are being offered by robo-advisors, which construct portfolios of low-cost ETFs using algorithms, thus keeping costs to a minimum. Robo-advisors are covered in more detail in section 1.5 of chapter 7.

3.10 Environmental, Social and Governance (ESG) Factors

Environmental, social and governance (ESG) considerations were discussed in section 2.7.

Alongside value, size, momentum and volatility, among other factors that we have discussed so far, investors may also take ESG factors into account when selecting equities and equity funds, with a focus on companies that have a positive impact on society and/or the environment.

Recall from section 3.2.1 that ordinary shareholders also usually have voting rights (normally one share, one vote), thus they can vote at company meetings on ESG and related issues. This means that ordinary shareholders have a say in how firms are run and an ability to influence management.

Today, one of the most important issues for ethical, responsible and sustainable investors is shareholder engagement as an alternative to the formal vote on a shareholder resolution (see section 3.5.6).

Importantly, different companies are at different stages of ESG awareness and integration, and some may need more guidance than others to keep them on track to meet their ESG targets – for example, via shareholder engagement. For these measures to be effective, though, they must aim to address issues that are relevant to the business in question and be well thought out; otherwise, they may have unintended consequences.

Notably, as yet, there is no standardised methodology with regard to quantifying companies' ESG risks and measuring their impact, therefore making it difficult for ethical, responsible and sustainable investors to assess how those businesses perform from an environmental and social perspective. As more data becomes available (and, in turn, as transparency improves), ethical, responsible and sustainable investors should be able to make more informed investment decisions.

3.11 Listing and Trading of Equities

Learning Objective

1.5.1 Understand the issues involved in dealing for clients in equity markets: recognised and designated investment exchanges; multilateral trading platforms; organised trading facilities (OTFs); OTC trading; access to markets; principal and agency trading; quoted and unquoted securities; admission to trading

3.11.1 Listing of Shares

Companies may seek to list their shares for one of several reasons; for example:

- To raise capital for further growth.
- To put an objective value on the business.
- To create a market in the company's shares, or increase liquidity in them, so as to give existing shareholders the opportunity to realise the value of their shareholdings (an exit route).
- To allow the company to acquire other companies, both as a result of greater access to the necessary capital to fund the takeover, and being able to issue shares with a market value as a means of funding the acquisition.
- To enhance the company's credibility which can improve its business prospects.
- To enable the company to provide for employee participation in its ownership, increasing their long-term commitment to the business and improving the recruitment and retention of good staff.
- To improve efficiency. This happens because listing requires high levels of disclosure and transparency over the company's affairs which are likely to lead to improved internal controls and management structure, and usually, greater operating efficiency for the business as a result.

Note that there is a differentiation between the terms 'listing', 'admission to trade' and 'quoted':

- The term 'Listed' means that a company's shares have met a range of criteria and minimum standards which allow them to be traded on a particular stock market.
- 'Admission to trading' means that the shares have been admitted to trading on a particular stock market. This can take place without prior listing procedure; thus, not all listed companies' shares are admitted to trading.
- Where a company's shares are actually available for trading and prices are available, they are referred to as 'quoted'.

3.11.2 Stock Exchanges

Also called an investment exchange, a stock exchange is an organised marketplace for issuing and trading securities by members of that exchange. Each exchange has its own rules and regulations for companies seeking a listing, but typically, these rules relate to the issuing firm's size (as measured by market capitalisation or annual income), the market share of the security to be listed (ie, their liquidity) and the firm's underlying financial viability. In some cases, stock exchanges have multiple sets of listing requirements, of which a specified number must be met by a firm for listing to take place. Firms must be

able to prove to the exchange that they meet the listing requirement when they are applying for their securities to be listed, and to remain listed they must meet continuing obligations.

Historically, stock exchanges have operated as national monopolies from a central location or physical marketplace, mainly catering to the needs of domestic investors and domestic issuers. As predominantly mutually owned (or not-for-profit) organisations, many stock exchanges had become bureaucratic, parochial and resistant to change. Therefore, they had restricted access to new capital for fund development, a lack of investment in new trading and settlement technology as well as limited expansion into new markets.

However, more recently, in an attempt to meet the challenges posed by competing trading systems and the globalisation of financial markets in an increasingly price-sensitive and competitive global marketplace, many have sought to become more dynamic, cost-efficient and have striven to create new markets. Indeed, stock exchanges have been taking their lead from the radical changes recently undertaken in the derivatives markets. These have included abandoning restrictive mutual ownership by exchange members to become shareholder-owned listed companies, operating as electronic trading networks as the move to electronic trading has gathered pace, and creating new markets through strategic mergers and alliances with other exchanges.

The motivation behind many of these mergers and alliances has been a realisation that financial markets have integrated to such a degree that the shares of most multinational companies are now listed on those stock exchanges that best reflect the global distribution and capital requirements of their business. Listing on an overseas stock exchange also enhances the liquidity and marketability of companies' shares and can also build the company's brand. In effect, a global capital market has been created through the globalisation of markets and economies.

The UK

In the UK, the FCA is responsible for setting the listing criteria. This role was previously carried out by the UK Listing Authority (UKLA), which was part of the FCA, but the UKLA name has been replaced by the FCA as the listing authority in the UK.

The LSE is one of the largest stock exchanges in the world. As a recognised investment exchange (RIE), it is responsible for:

- providing a primary and secondary market for equities and fixed-interest securities
- supervising its member firms
- regulating the markets it operates
- recording all transactions, or bargains, executed on the exchange, and
- disseminating price sensitive company information received by its regulatory news service (RNS) and distributed through commercial quote vendors, also known as secondary information providers (SIPs).

The LSE operates both a primary and secondary market for the following:

- Domestic plcs, including:
  - **The main market** (ie, companies with a full listing) – representing a 'badge of quality' for companies admitted to and traded on it, the main market is a proven way to raise capital and gain profile. Among other requirements, companies wishing to list on the main market must have a minimum market capitalisation of at least £30 million (of which no less than 10% must be made freely available to the investing public), and a trading history of at least three years.
  - **AIM** – launched in 1995, this is the LSE's market for innovative growing companies. AIM includes a wide range of businesses ranging from young, venture capital-backed start-ups to well-established, mature organisations looking to expand. Many companies have made the transition to the exchange's main market following their success and positive experience on AIM. To join AIM, there is also no minimum requirement in terms of size, nor do companies need a particular financial track record or trading history.
  - **Exchange-traded funds (ETFs)** and other innovative investments.
  - **International equities** – the LSE is a global marketplace. Over 1,000 companies from 100 different countries use a London listing to gain the profile and access to capital they need to develop and grow into truly global companies. Similar markets exist overseas, including Nasdaq and the NYSE in the US, the Hang Seng in Hong Kong and the Shenzhen in China.
  - **Domestic bonds**, including gilts, local authority fixed-interest securities and corporate bonds.

The UK markets cater to companies large and small, from start-ups to global brands. The FCA recognises and supervises a number of recognised investment exchanges (RIEs) under the Financial Services and Markets Act (FSMA) 2000. Recognition gives an exemption from the need to be authorised to carry on regulated activities. In their capacity as market operators, RIEs may operate regulated markets and multilateral trading facilities (MTFs). To be recognised, RIEs must comply with the recognition requirements laid down in the Financial Services and Markets Act 2000 (Recognition Requirement for Investment Exchanges and Clearing Houses) Regulations 2001.

Europe

Europe does not have a single financial hub, but several major centres.

Germany is the central location for business in Europe. The country is home to several stock exchanges, with the largest being the Frankfurt Stock Exchange, which accounts for about 90% of share turnover. This exchange lists most major German public companies, as well as many non-German companies. The Federal Financial Supervisory Authority (BaFin) regulates the market, establishing the minimum listing requirements under the German Stock Exchange Act – these requirements differ depending on the segment of the exchange:

- **The Official Market** – features particularly strict admission criteria and follow-on obligations.
- **The Regulated Market** – serves as an entry segment and pre-stage of the Official Market. Companies must follow slightly less strict admission criteria and pay lower admission fees.
- **The Open Market (Regulated Unofficial Market) –** trades equities and bonds of both German and foreign issuers. To include their shares in trading, companies fulfil lower admission requirements and fewer follow-on obligations.

The Official and Regulated Markets are both governed by public law, and companies listed in these segments fulfil the highest Europe-wide transparency standards.

The US

The US is home to the world's largest stock exchange by market capitalisation: the NYSE. The NYSE's origin can be traced back to 1792, when the Buttonwood Agreement was signed by 24 stockbrokers outside of 68 Wall Street under a buttonwood tree. Today, the NYSE lists over 2,200 companies.

Since companies in the US can only list on one domestic stock exchange, most technology companies choose to list on the Nasdaq. Nasdaq is larger than the NYSE in terms of trading volume and daily turnover and lists about 3,700 companies.

In order to be listed on the NYSE or Nasdaq, a company must meet certain requirements – for example, they must have 1.1 million or 1.25 million publicly traded shares respectively, with a collective market value of at least $100 million or $45 million respectively. At the time of listing, the company's shares must have a regular bid price of at least $4, among other standards. Further, all companies must adhere to the US Securities and Exchange Commission (SEC) Marketplace Rules.

China

China has three exchanges:

- **Shanghai Stock Exchange (SSE)** is China's largest exchange. It lists two different types of stocks: A and B shares. The difference between them is the currency they are traded in: A shares are traded in renminbi, whereas B shares are traded in US dollars. Most of the 2,300 stocks listed on the exchange are A shares.
- **Shenzhen Stock Exchange (SZSE)** was established at the same time as the SSE. It is the market for about 2,800 smaller and emerging sector companies.
- **Hong Kong Stock Exchange** is the sixth largest stock exchange in the world. The index is called the Hang Seng, which consists of the largest 80 of the 2,600 companies listed on the exchange and represents around 70% of the value of all stocks traded.

A company seeking a listing on any of these exchanges must meet several requirements, as set by the China Securities and Regulatory Commission (CSRC). Each exchange has its own requirements relating to corporate governance, financials and share capital, among other things which are more stringent depending on the segment or tier within it.

Japan

The largest stock exchange in Japan is the Tokyo Stock Exchange (TSE), which is owned by the Japan Exchange Group. The TSE lists about 3,900 stocks, divided into three market segments:

- **Prime** – companies with appropriate levels of market capitalisation (thus high liquidity) and excellent corporate governance. They must also have committed to sustainable growth and improvement of medium- to long-term corporate value, putting constructive dialogue with global investors at their centre.

- **Standard** – companies with appropriate levels of market capitalisation (ie, liquidity), and basic corporate governance standards. They must have committed to sustainable growth and improvement of medium- to long-term corporate value.
- **Growth** – companies with high growth potential, but also relatively high risks, so they must disclose progress at set time periods.

Of these, the Prime Market has the most stringent listing requirements, while those for the Growth Market are less strict. Whichever segment a company is listed on, they must comply with Japan's Corporate Governance Code, which establishes the fundamental principles for effective corporate governance at listed companies in Japan.

3.11.3 Alternative Trading Platforms

Traditionally, trading in securities centred on a large national stock exchange such as the LSE, NYSE and TSE. Since the mid-1990s, trading platforms (and the infrastructure supporting them) have evolved significantly from the more conventional systems in response to the changing needs of the financial markets.

In 1998, the US Securities and Exchange Commission (SEC) authorised the introduction of electronic communication networks (ECNs), also called, alternative trading networks (ATNs). These are essentially computerised trading platforms that allow trading of various financial assets to take place away from a specific venue, such as a stock exchange. The primary motivation for this authorisation was to increase competition among trading firms by lowering transaction costs, giving clients full access to their order books, and offering order matching outside of traditional exchange hours.

In 2007, the Markets in Financial Instruments Directive (MiFID) – a piece of European legislation that has now been largely transposed into UK law following Brexit – became effective. Important features of MiFID include that it:

- aims to improve pre-trade and post-trade transparency, and
- introduced the concept of MTFs, organised trading facilities (OTFs) and systematic internalisers (SIs), thus making it easier for investors to trade securities away from a stock exchange.

MiFID II, which entered into force in 2018, extended the concept of trading venues to include regulated markets, MTFs, OTFs and SIs.

Multilateral Trading Facilities (MTFs)

MTFs offer retail investors and investment firms an alternative venue to trading on formal exchanges. An MTF is, in short, an enabling system that brings together multiple parties that are interested in buying and selling financial instruments. These systems can be crossing networks or matching engines that are operated by an investment firm or a market operator. Instruments may include shares, bonds and derivatives. This is done within the MTF operator's system. The investment firm operating the MTF has no discretion as to how interested parties may interact. These parties form a contract and the trade is executed under the system's rules or in accordance with the system's internal operating procedures.

Under MiFID, an investment firm operating an MTF is required to have systems and controls in place to ensure that the performance of its activities is adequate, effective and appropriate.

MiFID II subjects regulated markets and MTFs to equivalent organisational requirements and similar regulatory oversight. These changes aim to ensure fair and orderly trading and efficient execution of orders, and will require published and non-discriminatory rules. MTF operators are required to have specific arrangements in place to identify and manage conflicts of interest, with systems to recognise and mitigate operational risks and to manage the technical operation of the system.

Organised Trading Facilities (OTFs)

MiFID II introduced a new category of trading venue called OTFs. An OTF is a multilateral system where multiple third-party buying and selling interests in bonds, structured finance products, emission allowances or derivatives are able to interact in a way that results in a contract. Equities are not permitted to be traded through an OTF.

The introduction of OTFs means that many transactions, previously categorised as off-venue, now come within a multilateral trading environment. This, ultimately, increases overall market transparency, reduces the prevalence of opaque market models and products and increases the quality of price discovery, investor protection and liquidity.

Systematic Internalisers (SIs)

In broad terms, an SI is a qualifying investment firm which (on an organised, frequent, systematic and substantial basis) deals on its own account by executing client orders outside a regulated market, MTF or OTF. The firm executes orders from its clients against its own book or against orders from other clients.

For a firm to become an SI, it must trade on its own account on a 'frequent and systematic basis' when executing client orders outside a regulated market, MTF or OTF. The terms 'frequent' and 'systematic' will be measured by the proportion and volume of over-the-counter (OTC) trades in financial instruments carried out by the firm executing client orders on its own account.

The same legal entity cannot operate both an OTF and be an SI.

3.11.4 Dark Pools

This is the name given to a network that allows traders to buy or sell large orders without running the risk that other traders will work out what is going on and increase the price, or decrease it, to take advantage of the order. They have been criticised for their lack of transparency and because the inevitable fragmentation of trading could lead to less efficient pricing in traditional open stock exchanges. In dark pools, pre-trade prices (the price at which shares are offered for sale) are not visible to anyone, even the participants in them and the price at which shares change hands is only revealed post trading.

The creation of dark pools has been helped by the development of alternative trading platforms and computerised dealing systems (normally institutions access them through private contracts among the major market participants). Generally, dark pools cannot be accessed by an ordinary small investor (note that some brokers do offer such access, but this is not the norm).

3.11.5 Alternative Trading Platforms and Over-the-Counter (OTC)

Alternative trading platforms have risen in importance in several financial markets around the world as an alternative to traditional exchanges, or as a complement to voice broking and bilateral OTC trading. Worldwide, these platforms account for much of the liquidity found in publicly traded issues. They have also allowed market participants to adopt new trading strategies, such as posting limit orders or crossing trades.

OTC (or **off-exchange** trading) is used for trading financial instruments such as equities, bonds, **commodities** and derivatives directly between two parties. This contrasts with exchange trading, which uses facilities constructed for the purpose of trading (ie, exchanges), such as futures exchanges or stock exchanges.

An OTC contract is a bilateral contract in which two parties agree on how a particular trade or agreement is to be settled in the future. It is usually from an investment bank to its clients directly. Forwards and swaps are prime examples of such contracts. They are mostly executed via the computer or the telephone.

3.11.6 Agency and Principal Dealing

When someone is acting as an agent and buys a stock on behalf of an investor, the agent does not own the stock that they are buying. Instead, they are buying it from a dealer on behalf of their client.

When the agent buys the stock, they will pay the dealer's 'mark-up'. However, the agent cannot then pass another mark-up on to the investor. The agent is obliged to get a price for the stock (which is what they have to pay the dealer) and then pass that price on to the investor. For facilitating the transaction, the agent will charge a fee.

When someone is acting as principal, that person is buying a stock that they have actually purchased themselves and are holding it in their own inventory. The principal, therefore, takes more risk than an agent because, while the principal is holding the stock, they are exposed to any movement in the stock price and could lose money if the price drops.

The principal does not charge a fee, but instead applies a mark-up. A principal may provide investors with 'bid' and 'offer' (or 'ask') quotes. The bid is what they are willing to pay to buy stock from another investor, and the offer is the price they require in order to sell the stock. The difference between the two quotes is called the 'spread' and represents the profit to the principal.

3.11.7 Unquoted Shares

Shares in some companies, often smaller ones, are not traded on any stock exchange.

Companies might not be quoted (or listed) because they prefer to run their businesses in relative privacy, or because they do not meet the listing requirements. For example, many stock exchanges worldwide require companies to have a minimum trading record (eg, three years) and a minimum market capitalisation.

4. Property

Learning Objective

1.6.1 Understand the differences, characteristics, risk and returns of the main property markets and sectors: residential buy-to-let; commercial – retail space, hotel, office, industrial/warehouse; agricultural

1.6.2 Analyse the main sources of investment risk and return associated with property investment, both direct and indirect: capital growth; yield; location and quality; occupancy rate; tenant creditworthiness, tenancy and rental agreement; term and structure of lease; asset liquidity; market volatility and risk; sector risk

1.6.3 Understand how the direct residential, commercial and agricultural property markets operate: ownership and lease structures; conveyancing, buying and selling; costs – transactional, management; property valuation; finance and gearing

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Alongside equities, bonds and cash, property is considered to be one of the four main types of investment. However, this asset class has some unique features that are not common to equities, bonds or cash:

1. It is an investment in a fixed immovable object, (ie, land or property located in a certain space).
2. One property is only approximately comparable to another; hence, it is not fungible with another and presents challenges for valuers. Property is also not divisible which makes it unique.
3. Property is illiquid due to its immovability and indivisibility.

Consequently, as an asset class, property (or real estate) is often considered to be a special type of alternative investment. Property is, therefore, very distinct owing to its low correlation with both traditional and alternative asset classes, so an exposure to property within a client's portfolio can enhance diversification benefits.

It is worth noting, though, that funds themselves investing in physical 'bricks and mortar' assets (rather than in the shares of property companies) can also be subject to liquidity issues – for example, during the global financial crisis and the COVID-19 pandemic, when dealing in several property funds was suspended to protect existing investors; while those that remained open (if at all) applied significant downward adjustments to their prices.

4.1 Types of Property

Since the 1990s, investment in property has proliferated as people saw the value of properties rise and this has led to greater interest in this asset class. Property has a role to play in a well-diversified portfolio, and a portfolio manager needs to consider whether exposure to this asset class is appropriate for the portfolio they are managing.

Within property, there are three categories – residential, commercial and agricultural – each of which has its own set of characteristics. It is therefore, important to understand the key differences between them, as follows:

	Residential Property	Commercial Property	Agricultural Property
Direct Investment	Range of investment opportunities including second homes, holiday homes and buy-to-let	Size of investment required means direct investment is limited to property companies and institutional investors	
Tenancies	Typically, short renewable leases	Long-term contracts with periods commonly in excess of ten years	Wide scope for how long a tenancy term should be
Repairs	Landlord/owner is responsible	Tenant is usually responsible	Needs to be made clear who is responsible at the outset
Returns	Largely linked to increase in house prices	Significant component is income return from rental income	Rental income and land appreciation

Whichever type of investment property is purchased, the owner (landlord) hopes that the rental income and capital value will both increase (returns are covered in section 4.2). Notably, though, sales and purchases of any type of physical property are time-consuming and expensive, the latter of which can eat into return (see section 4.4.3 for more information on costs).

With the rise of e-commerce, many agents now market properties via websites, and several platforms have emerged to create electronic marketplaces. Property auction houses also sell commercial lots for sellers, and in recent years, the auction market has grown steadily, driven by increasing demand from private investors. Two factors fuelling this demand are that initial yields on properties in the auction room have outpaced finance rates, and there has been a ready supply of debt finance.

4.1.1 Characteristics of the Residential Property Market

The most common forms of direct residential property investment is buy-to-let. This involves purchasing a property outright, or through leveraged purchases, which is then rented out to tenants in exchange for rental income, which typically increases with inflation.

Alternatively, investors may purchase a property (again, either outright or through a leveraged purchase) for renovation, which is then sold for a 'quick' profit (note that the average time to complete a property sale is about three to six months, although this can be longer in some cases).

4.1.2 Characteristics of the Commercial Property Market

Commercial property is divided into three main sectors: retail, offices and industrial. The types of underlying property contained in each sector are:

- **Retail** – shopping centres, retail warehouses, standard shops, supermarkets and department stores.
- **Offices** – standard offices and business parks.
- **Industrial** – standard industrial estates and distribution warehousing, or logistics facilities.

Investment in commercial property has tended in the past to be dominated by insurance companies and pension funds. These institutions may, in the course of their investments, act as property developers and, once a property is built, the landlord. In recent years, more private investors have been making direct investment in commercial property, including wealthy individuals from overseas.

Commercial property is typically let on long leases of up to 25 years, with three- or five-year rent reviews. Offices, factories and warehouses tend to produce the highest yields and retail the lowest.

4.1.3 Characteristics of the Agricultural Property Market

Agricultural property includes land or pasture that is used to grow crops and rear animals, as well as the buildings on that land (eg, farm buildings, farm cottages and farmhouses).

As an asset class, the agricultural property market is less developed, more illiquid and less transparent than other asset classes. Despite this, some investors are turning to agricultural property as a way of diversifying their portfolios, in particular, due to the scarcity and high price of property and land in cities that is, in their view, making residential and commercial property less attractive as an investment opportunity.

Historically, many farming estates qualified for 100% IHT relief on agricultural land and buildings, allowing them to pass assets to the next generation tax-free. However, following the Autumn Budget 2024 (see chapter 4, section 6.1.5), this will change. From 6 April 2026, the UK government will cap full relief at £1 million of combined agricultural and business property; anything above that will receive only 50% relief, with the remaining value taxed at up to 20%. Given that many farms are now valued well above £1 million, this change could result in tax bills exceeding £300,000 for some families. If the estate lacks sufficient liquid assets, then selling land may be the only practical way to raise funds – especially since IHT is typically due within six months of death.

Notably, many new technologies have been introduced into agriculture over the past few decades such as drones and satellite imagery, improved genetics and increased data collection and analysis. This has resulted in productivity improvements (eg, higher yields and/or lower costs of production), which have positively influenced profitability and underlying land values.

Agricultural property is generally subject to the risks associated with the ownership of other property-related assets including changes in economic conditions, environmental risks, risks related to the leasing of properties and the cost of, and ability to, obtain insurance.

Auctions aside, there is no formal public market for commercial or agricultural property investments. They are primarily private markets, made principally by agents who seek to match buyers and sellers.

Sellers typically engage an agent to market their property. The buyer will usually recognise the agent's role in introducing the property to them, either by retaining the agent to act on the purchase or simply by paying an introductory fee. The lack of a formal exchange means that valuers are used to estimate the likely selling price of a commercial or agricultural property. This process combines financial information about the property with market data to come to a balanced, evidence-supported assessment of its value.

4.2 Returns from Property Investment

Relative to other asset classes, property can offer investors potentially higher returns over the long term in the form of capital growth, as well as a reliable stream of income (ie, rents).

Rental income is a large part of the return on a buy-to-let property. For leases that include 'upward only' clauses, rent will only ever go up when it falls due for review or, at the very least, stay the same; it will never go down. This means they provide an element of inflation hedging. See section 4.2.1 for further detail.

For other investors, the focus is on buying a property to renovate, then reselling it at a higher value.

Both investment strategies have the potential of providing attractive returns, although timing can dictate which one is more suited to an individual's circumstances: for those willing to take a long-term commitment, the 'buy and hold' (rental) method may be preferable, while those wanting to see profits quickly will likely prefer the 'fix and flip' (resale) method.

Whichever method is preferred, investors can calculate the returns on their investments, details of which are covered in sections 4.2.1 (returns from rent) and 4.2.2 (capital returns).

Direct property investment has historically demonstrated low levels of volatility due to the infrequency of valuations (which are often determined by third-party appraisals) and transactions. When carrying out a property valuation, a valuer (eg, a surveyor) will consider many factors, including the property's size, age, condition and location, as well as using comparable data (ie, what neighbouring properties have sold for) and market indicators (ie, supply and demand).

For indirect investment (eg, **real estate investment trusts (REITs)**, property equities or property funds), the distinguishing feature is that the asset class generates regular income and long-term capital gains derived from the underlying direct property investment. Further, there are benefits in terms of liquidity as investors can sell their shares in the property company's stock to release capital when required (although the value of these shares may fluctuate based on market conditions, and there may be transaction costs or delays in executing trades).

For both direct and indirect investment, property can be subject to prolonged downturns. In this regard, commercial property is more vulnerable to economic declines than residential property, as businesses tend to be more volatile during these conditions. The availability of indirect investment options has made property more accessible to investors with smaller portfolios.

4.2.1 Returns from Rent

Over the long term, property investment has generally outperformed cash and gilts, and slightly underperformed equities, across multiple countries. This is largely due to the upward-only rent review clauses common in leases, meaning that rents can only stay the same or increase when reviewed, even if market rents decline. Rent reviews are discussed further in section 4.7.4.

The rental yield is calculated as follows:

Rental yield (%) = Gross rent – Expenses / Cost of property, including purchase costs

For this calculation:

- Gross rent should be adjusted by excluding estimated void periods (see section 4.4.6), which can generally only be estimated in calculating the yield for a future period. The rental yield can then be compared with the rate that the investor is paying for a loan to purchase the property.
- Purchase costs include legal fees, the cost of surveys, **stamp duty land tax (SDLT)** or equivalent, furnishings and, if applicable, agents' fees for property management and conveyancing. These costs are discussed further in sections 4.4.3 and 4.4.4.

The rental income on the property will depend on a variety of factors, including supply and demand, quality and appeal of the property, and lease terms (which may limit how often or by how much rent can be adjusted).

Property values are often assessed as a multiple of the rental income. For example, a property might be purchased at a price that equates to a 20-year multiple of the annual rent. A property priced at a high multiple may reflect expectations of strong future rental growth, although this is not guaranteed.

Tax Treatment of Rental Income

Regardless of property type, rental income is taxed as business income, and losses from one property can offset profits from another. Certain expenses, such as mortgage interest, insurance and agent fees, can be deducted from taxable income.

For specific property types, there are additional allowances and reliefs. For example, for residential properties, the rent-a-room scheme (where someone lets out a room in their own home) offers tax-free income up to £7,500 a year for the 2025–26 tax year; and commercial property owners can benefit from capital allowances such as the annual investment allowance (AIA) and writing down allowance (WDA) on qualifying assets.

4.2.2 Capital Returns

Over time, property and land values can be seen to increase, generally in excess of inflation (providing a real return). However, the property market is cyclical and can fall sharply.

Commercial property can be vulnerable to influences on overseas investment to a greater extent than residential property. Factors such as the value of the domestic currency and how foreign investors are taxed on commercial property can affect prices. In addition, since much of the commercial property market is owned by large institutional investors, it means it must compete with other asset classes such as equities and bonds.

For agricultural property, land values are impacted by various factors. For example, larger plots with longer tenancy terms, in better locations and good quality land typically achieve higher rents. Further, higher crop prices can increase the value of the underlying land, which leads to more robust valuations when the land is sold.

Effects such as interest rate moves can have a significant effect on the property market due to the market's leverage through borrowing. This can affect the cost of servicing any debt taken on. Higher rates can have a negative effect, while lower rates can be positive.

Depreciation

Property prices can be affected by the condition of the property. If it is deteriorating and no remedial action is taken, it may depreciate steadily as the costs involved in restoring it continue to rise. Eventually, it may fall to a level where the only real value is the land on which it stands – and this must be offset against the costs of levelling the property and rebuilding.

4.2.3 Key Factors for Property Returns

The three key factors for property investments in terms of performance are, in this order:

- **Position in the cycle at purchase**.
  - Like the economy, the property market cycles through growth, oversupply, stagnation and recovery, which affects property values and rents.
- **GDP growth**.
  - Economic expansion often leads to increased demand for goods and services (including property), thus raising prices and rents. Conversely, economic contraction reduces demand, leading to a decline in property values.
- **Inflation**.
  - While inflation is an important driver of nominal returns, it is not the dominant factor. Rising inflation increases the cost of construction materials, labour and financing costs, pushing property prices and rents higher. However, if inflation occurs alongside low or negative economic growth (stagflation), it can reduce demand and therefore property values. As income is the primary source of real returns over most years and sub-periods, focusing on returns in real terms highlights the need to maintain and protect income.

Scenario	Description
Best scenario for property	High-growth, low-inflation stage of the economic cycle associated with the non-inflationary consistent expansion (NICE) era.
Beneficial scenario	High GDP growth, unless it is also accompanied by high inflation. In this case, the demand-pull scenario (when strong economic growth drives competition for resources and rising prices) does not suggest a higher property allocation, except for high-risk investors.
Worst scenario for property	High-inflation, low-growth (stagflation) stage. This implies that cost-push inflation (eg, when **commodity** prices are rising faster than retail inflation) is not favourable.

From this, we can see that property should be preferred to equities when low inflation is expected, except if accompanied by low growth, in which case equities should be preferred.

4.3 Key Risks of Property Investment

The key risks of property investment are as follows:

- **Capital is locked in** – investing in property inevitably means that the investor's money will be tied up for a long period, which could mean that they are tied down for years without making any money from their investment (either from rental income or from the ultimate sale).
- **'Bricks and mortar' property and funds investing in physical assets can face liquidity challenges** – physical property can be hard to sell quickly, particularly in periods of market downturn (eg, the global financial crisis and the COVID-19 pandemic). Further, funds that remain open can apply significant downward adjustments to their prices. The introduction of long-term asset funds (LTAFs) has provided a structure aimed at improving liquidity management and investor protection (see section 4.8.4).
- **The investor may be unable to find tenants** – if the investor is unable to find tenants, they will have to cover all costs out of their own pocket. When calculating the prospective returns from an investment opportunity, investors should be conservative in their calculations and factor in some void time. Alternatively, they can employ a managing agent who (among other things) pays a guaranteed rental income each and every month, providing the property is suitable and ready to let, although this comes at a cost. See section 4.4.6 on void periods.
- **Tenants may not pay their rent or may cause damage to the property** – if tenants do not pay on time, or do not respect the property and cause damage, then this can end up causing stress as well as financial and emotional harm to the investor. See section 4.4.5 on the quality of tenants.
- **The investor may have unexpected maintenance costs** – this includes, but is not limited to, safety testing and certification, decorating and renovation. These costs can be high, particularly for older properties, and they will inevitably reduce returns on the investment.
- **Property prices can fall as well as rise** – while property prices have generally increased over the long term, they can fall in the short term, which can lead to the investor selling the property at a poor sale price. Historical examples of market crashes include the UK between 1989 and 1992, when office rents halved following speculative development in London, and the global subprime mortgage crisis starting in 2006. Interest rates play a significant role, as rising rates make borrowing (eg, mortgages) more expensive leading to downward pressure on property prices.

4.4 Direct Property Ownership

The following sections primarily focus on direct property investment, rather than indirect investment methods. Indirect property is covered in section 4.8 of this chapter.

4.4.1 Lease Structures

In England, Wales and Northern Ireland, an interest in property can either take the form of a freehold or a leasehold interest. In Scotland, nearly all property is held under a tenure known as 'outright or absolute ownership', which is comparable to freehold.

- **Freehold** – the freeholder of a property has the right to use or dispose of the property as they wish, albeit subject to legislation, local planning laws and any covenants that specifically apply to the property.
- **Leasehold** – the freeholder can create a lessor interest in the property, known as a leasehold interest. The leaseholder (or tenant) to whom this interest is granted has the right to use the property for a specific period, subject to the terms of the lease and the payment of rent. Unless restricted by the lease terms, the leaseholder can also create a sublease and act as the head lessee to a subtenant. At the end of the lease, the tenant may vacate the property and return possession to the landlord or, if agreed, they may negotiate a lease renewal or extension.

Some leases include break clauses that can significantly impact the investment value of a property as they can give the landlord and the tenant the option to end the lease before its expiry date. The standard convention is to assume that a tenant's break option will be exercised and that it will have a negative impact as the income from the property can change or even disappear at this point.

On the other hand, landlords' break options can have a positive impact, as they give the opportunity to re-let at a higher rent, find a better tenant or refurbish the property. When a commercial property is rented out, a rent review period is agreed between the landlord and the tenant and set out in the terms of the lease. In the UK, for example, commercial rents are typically reviewed every five years and the revised rent is based on what rents can be achieved in the open market for comparable properties. Leases often provide for upwards-only reviews, where the new rent cannot be lower than the rent that the tenant is currently paying.

Another property ownership system in England and Wales (not Northern Ireland or Scotland) is commonhold, which offers an alternative to leasehold for multi-occupancy buildings (typically flats).

A commonhold comprises individual freehold units (owned by unitholders) and communal areas (eg, roof, stairs), the latter of which are owned and managed by a Commonhold Association (CA) comprised solely

of unitholders. The CA governs the property according to the commonhold community statement (CCS), which sets out the rights and obligations of the CA and unitholders, and procedures for dispute resolution.

The key benefits of commonhold over leasehold include the absence of a diminishing lease term, no need for a landlord, and standardised documentation that clarifies unitholders' rights and obligations. This system mirrors strata title in Australia and condominium ownership in the US, for example.

4.4.2 Borrowing

Given the substantial value of most properties and the fact that they can make excellent security for lending purposes, most property investments are made with help from borrowed funds. Therefore, the investment is geared.

The **gearing** effect of borrowing for property purchase can be severe if prices start to fall, and negative equity can result if the loan is a high percentage of the property value.

Government interventions can influence property values. For example, the UK's Help-to-Buy scheme helped first-time buyers with small deposits to get on the property ladder by providing an interest-free equity loan of up to 20% (or 40% in London) of the purchase price for five years, in exchange, for partial ownership of the property. After the five-year period, borrowers can either repay the loan in full or pay it off with interest over the next 25 years. While the scheme closed in 2023, many people still have an equity loan, meaning that the last repayments are due by 2048.

4.4.3 Costs

Transaction Costs

Property transactional costs are relatively high compared to other financial instruments. For buyers in particular, the costs are significant compared to other assets, ranging from 0.5% to 5% of the value of the property purchased (or even higher in certain cases) as more costs are imposed upon them compared with the seller. This is another reason why property is a long-term investment.

One such cost imposed upon buyers – and the most significant – is SDLT, which is payable on the purchase or transfer of property or land in England and Northern Ireland when the amount paid is above a certain threshold. It is charged as a percentage of the amount paid, unless there is a relief or exemption. The amount payable can also vary depending on whether the property is being used for residential or non-residential purposes, and if it is freehold or leasehold. SDLT is not chargeable in certain circumstances – eg, for transfers on divorce, or for transfers to charities if the land is to be used for charitable purposes.

Land transaction tax (LTT) in Wales and a land and buildings transaction tax (LBTT) in Scotland are levied instead of SDLT. Broadly, this tax is paid as a percentage of the amount paid for the property or land when it is bought or transferred, or if purchased over a certain threshold. The rate depends on whether the land or property is to be used for residential purposes and whether the buyer already owns one or more properties. Other countries also have their own versions of SDLT.

SDLT Rates and Thresholds

Purchase price/lease premium or transfer value	Rate
Up to £125,000	Zero
The next £125,000 (£125,001 to £250,000)	2%
The next £675,000 (£250,001 to £925,000)	5%
The next £575,000 (£925,001 to £1.5 million)	10%
The remainder above £1,500,001	12%
Over £500,000 (purchased by certain persons including corporate bodies and 'non-natural' persons)	15%

Source: GOV.UK[24]

Regarding the 15% rate, a corporate body includes companies, collective investment schemes (CISs), and partnerships where one or more of the partners is a company. Relief may be available in certain circumstances – for example, if the property is used in a property rental business, or if it has been bought by a property developer or trader. Further, this higher rate does not apply to residential property bought by a company that is acting as a trustee of a settlement.

If the value of the property is above the payment threshold, the SDLT is charged at the appropriate rate on each portion of the whole of the amount paid. To demonstrate how this works, the table below shows the calculation for a house bought for £500,000 and a house bought for £930,000:

	House bought for £500,000	House bought for £930,000
Up to £125,000 @ 0%	£125,000 x 0% = £0	£125,000 x 0% = £0
Next £125,000 @ 2%	£125,000 x 2% = £2,500	£125,000 x 2% = £2,500
Next £675,000 @ 5%	£250,000 x 5% = £12,500	£675,000 x 5% = £33,750
Next £575,000 @ 10%	Not applicable	£5,000 x 10% = £500
Total SDLT	**£15,000**	**£36,750**

Individuals can claim a discount (ie, SDLT relief) if the property they buy is their first home; the discount they can claim depends on when they buy the property. Others have to pay SDLT on top of the normal rates in certain circumstances – for example, an additional 5% if buying a new residential property means they own more than one (however, they can get a refund if they sell or give away their previous main home within three years of buying the new one, subject to certain conditions). Furthermore, an additional 2% falls due for non-UK residents buying residential property in England and Northern Ireland, as part of the government's efforts to help control rising house prices and end rough sleeping by 2027.

24 GOV.UK, 2025. Stamp Duty Land Tax. Retrieved from https://www.gov.uk/stamp-duty-land-tax/residential-property-rates (Accessed: February 2025)

For non-residential leases or mixed-use leaseholds, the amount of SDLT depends on the purchase price of the lease (the lease premium) and the value of the annual rent paid (the net present value (NPV)). Note that for this purpose, the annual rent is the highest annual rent known to be payable in any year of the lease, not the NPV used to determine any tax payable on the rent.

Non-Residential Land or Property Rates and Thresholds

Purchase price/lease premium or transfer value (non-residential or mixed use)	SDLT rate
Up to £150,000	Zero
The next £100,000 (the portion from £150,001 to £250,000)	2%
The remaining amount (the portion above £250,000)	5%

Source: GOV.UK [25]

Management and Maintenance Costs

Landlords may decide to appoint a licensed agent (eg, a letting agent or a property management company) to manage the property on their behalf. The services provided by the agent may include collecting rent from tenants and managing the overall maintenance of the property. In exchange for these services, property managers charge a monthly fee – this can be either a flat fee or a percentage (typically 10–20%) of the monthly rental income.

To maintain a property, the owner is likely to incur various costs, including ongoing repairs and maintenance, insurance, rates and council tax (the amount of which will vary by local authority). However, depending on the terms of the rental agreement, these costs may instead fall to the tenant. If the owner is responsible for these costs, they should be factored into the calculation of the property's net return (see section 4.2).

For commercial properties, there may be legal requirements to ensure certain standards of access, security and safety, which can increase costs.

For agricultural property, disagreements may arise with regard repairing obligations. Therefore, it is important to clarify which parts of the property the tenant is responsible for maintaining, and whether they must return the property in the same condition as it was found.

The owner's responsibilities also need to be explicitly defined. To avoid disputes, a Schedule of Condition (which records the state of the property at the beginning of the term) should be prepared at the outset. The schedule must be agreed upon and signed by both parties, so it can be referred back to, if necessary.

25 GOV.UK. Stamp Duty Land Tax. Retrieved from https://www.gov.uk/stamp-duty-land-tax/nonresidential-and-mixed-rates (Accessed: February 2025)

On the whole, the costs associated with buying a property are significant compared to acquiring interests in other assets, largely due to the fees involved in the required due diligence.

4.4.4 Conveyancing

Conveyancing is the legal process of transferring property rights from seller to buyer (for a sale/purchase), or switching a mortgage from one lender to another (for remortgaging). It typically comes with significant cost, which can vary depending on the complexity of the transaction.

A conveyancing solicitor acts on behalf of either the buyer or seller, representing their interests in the property transaction. They ensure that the terms and conditions of the contract for sale are fair and reasonable and that all financial information is correct. The process differs depending on whether they are acting for the buyer or the seller.

The seller's conveyancer will first request a copy of the land registry entry for the property (sometimes referred to as the office copies). They will then prepare a contract for sale, incorporating the land registry plan and details, and forward it to the buyer's solicitor.

The buyer's solicitor will apply for the searches, including from the local authority, and will assess the contract for sale received from the seller's lawyer.

Additionally, if the buyer is borrowing money on a mortgage, the solicitor will need to receive a formal mortgage offer and confirm that the buyer has sufficient funds to complete the transaction.

If there are issues with the contract for sale, the buyer's solicitor will raise queries with the seller's solicitor. Once these have been resolved, the searches are complete and proof of funds is provided, both parties exchange contracts.

Exchange of contracts is a legal binding agreement, marking the point of no return for both parties. Up until this point, either party can withdraw from the process without penalty, except for any costs incurred so far. Once the contracts are exchanged, a completion date is normally agreed upon when the transfer will be finalised. On completion day, the buyer transfers the funds to the seller and, in return, the seller hands over the keys to the buyer.

4.4.5 Quality of Tenants

The quality of tenant in a let property is important to its overall investment return. Poor quality tenants may:

- **Not be able to pay their rent** – evicting and replacing them can (depending on the terms of the tenancy) be costly and time consuming and may also result in rental voids.
- **Fail to meet their obligations of maintaining the property in good order** – this can result in expense to the landlord in bringing it back to lettable standard once they depart.

The ideal tenant has a strong financial standing, solid references from earlier tenancies, and is likely to have an interest in maintaining the condition of the property on an ongoing basis.

4.4.6 Void Periods

When a property is unlet, then no income is earned (unless there is a 'guaranteed rent' agreement). A prospective investor should understand the local rental market and what factors influence local levels of demand in order to estimate what void periods can be expected and build these into estimates of rental income. The location of the property and its overall/quality condition and character can affect the incidence of void periods.

With guaranteed rent, the landlord enters into a contract with a letting agent or another third party, who controls and manages the property on their behalf. The agent is effectively the landlord's tenant, who pays a fixed monthly income to the landlord over an agreed period. While this provides landlords with a hassle-free way to earn a stable and predictable rental income, the payments are often lower than that offered by other arrangements due to the high fees involved (anywhere between 10-50% of the rental income). Also, as the letting agent is taking on risk in guaranteeing the rent (even during void periods or if the tenant refuses to pay in full), landlords typically have limited say in the choice of tenant. Guaranteed rents are not suitable for everyone.

An alternative is rent guarantee insurance (also known as tenant default insurance) to cover any void periods or lost rent, as well as for legal expenses and any disputes relating to the recovery of rent arrears, repossession or the eviction process.

4.5 Association of Real Estate Funds' Code of Practice

The Association of Real Estate Funds (AREF), a UK-based industry organisation, has a quality mark to highlight member property funds that are achieving a high standard of transparency and corporate governance.

One of AREF's key aims is to ensure that its fund members consistently offer high-quality products and services to investors through adherence to its Code of Practice. The Code outlines a framework for good corporate governance within real estate funds and also aims to promote consistency and comparability between funds.

AREF's quality mark indicates which funds are compliant with the Code across three categories:

- Governance of the fund.
- Operation of the fund.
- Unit dealing and performance reporting.

The Code is split into two levels of compliance: a minimum compliance standard which all funds must meet and a best practice level which funds are expected to adopt wherever possible. All members of AREF must confirm their compliance with the Code each year. This is then made publicly available on AREF's website, enabling investors and advisers to find out a fund's commitment to good governance.

4.6 Property Valuation

The Royal Institution of Chartered Surveyors (RICS) Appraisal and Valuation Standards (also known as the Red Book) is the global valuation practice standard. First published in 1976, the Red Book is utilised by RICS members (who operate in 146 countries worldwide) and their clients. Even when these standards are used, the valuation of a property and the price it sells for can still differ.

The Red Book was last updated in January 2024 to reflect changes in global standards and regulations. The update included the alignment with the new International Valuation Standards (IVS), the addition of new content on modelling and methods, and updates to address evolving practices, such as technology and ESG factors, and was carried out in response to feedback from stakeholders and to maintain high standards in valuation delivery. This update ensures that valuation practices remain robust, transparent and future-proof.

4.7 Valuation and Performance Measures

Learning Objective

1.6.4 Analyse property and property funds using the following valuation measures: cash flow and average yield; capitalisation rate; rental value and review; reversionary value; comparative analysis – market indices

Generating an income and capital growth from a property investment is a positive outcome, but how does this compare with those of other investments? Performance measurement allows investors to assess the effectiveness of their strategy by providing a standardised way to evaluate returns, risk and overall performance relative to market benchmarks or peer assets. In the property market, performance is often evaluated by reference to various measures and indices, which we will now consider.

4.7.1 Cash Flow and Average Yield

The simplest yardstick of property value is initial yield:

$$\text{Initial yield (\%)} = \frac{\text{Current annual rent}}{\text{Value of property, including purchase costs}}$$

This measure gives an indication of the income generated by the property relative to its purchase price, providing a straightforward snapshot of cash flow (which reflects the actual rental income less any ongoing property expenses).

The average initial yield across the whole property market fluctuates over time, and may reflect broader economic cycles as well as specific market conditions and investor sentiment. A higher initial yield generally suggests a property is delivering strong cash flow relative to its market value, whereas a lower yield indicates lower returns or higher property prices in relation to rental income.

4.7.2 Gross Rent Multiplier (GRM)

The gross rent multiplier (GRM) is a simple metric often used by investors to quickly gauge the potential value of a property compared to its rental income. It is calculated as follows:

GRM = Property Price / Gross annual rent income

A lower GRM suggests that the property is relatively more affordable compared to its income, and a higher GRM that it may be priced higher in relation to its rental income.

One limitation of the GRM is that it only considers gross rent income; operating expenses are not included. Therefore, it does not provide a comprehensive assessment of the property's profitability. The capitalisation rate gives a more complete picture.

4.7.3 Capitalisation Rate

The capitalisation (or cap) rate is a ratio used to estimate the value of income-producing properties. Put simply, the cap rate is calculated as follows:

$$\text{Cap rate} = \frac{\text{Net operating income}}{\text{Sales price or value of property}}$$

Investors, lenders and appraisers use the cap rate to estimate the purchase price of income-producing properties.

A market cap rate is determined by evaluating the financial data of similar properties that have recently sold in a specific market. It provides a more reliable estimate of value than GRM (see section 4.7.2), which only considers a property's price and gross rent income. This is because the cap rate calculation takes into account a wider range of financial details, such as the property's selling price, gross rent income, non-rental income, vacancy rates and operating expenses.

In a property transaction, the seller aims to achieve the highest possible price for the property or sell at the lowest cap rate, while the buyer seeks to purchase at the lowest price, which translates into a higher cap rate.

Investors expect a larger return when investing in high-risk income properties. As a result, the cap rate can vary significantly across different areas of a city or country, influenced by factors such as location desirability, crime levels and general condition of the area. For example, you would expect lower cap rates in newer, more desirable areas of a city, and higher cap rates in less desirable areas to compensate for the added risk.

In a property market, if net operating incomes are increasing and cap rates are declining over time for a particular type of property (eg, office buildings), then property values will generally increase. Conversely, if net operating incomes are decreasing and cap rates are increasing over time, then property values will typically decrease.

4.7.4 Rental Value and Review

Typically, rents for all property types (residential, commercial or agricultural) are reviewed every three to five years. However, the rent review period is agreed between the landlord and the tenant, and set out in the terms of the lease, meaning that reviews can occur more or less frequently.

Rent reviews are generally decided through negotiation between the tenant and landlord, with reference to the rents achieved in the open market for comparable properties. Once agreed, the tenant is committed to paying the landlord the rental income, which remains effectively fixed (subject only to further reviews) until the lease is terminated.

Many leases include upward-only rent review clauses, meaning the rent can only stay the same or increase when reviewed, even if market rents decline. Some leases may specify fixed annual increases or link adjustments to inflation, while others use specific comparables for these reviews.

If the landlord and tenant cannot agree on a rent adjustment, an independent expert (often appointed by the RICS in the UK) may be called upon to resolve the matter.

4.7.5 Reversionary Value

The reversionary value of a property is the expected value at the end of the lease term.

It is typical for a leasehold property's value to diminish as the lease nears its expiry. As a result, a property with a long lease is generally worth more on the open market than one with a short lease.

In enfranchisement cases, when leaseholders have the opportunity to extend their leases, it can generally be assumed that this will improve the value of the individual properties.

However, the extent of this improvement largely depends on the length of the unexpired term, and there are no hard and fast rules as to how much the value will increase. A valuer will assess this and provide an estimate based on research into comparable properties in the area.

If a leaseholder has made improvements to the property that affect its value, these must be disregarded for valuation purposes. If the improvements are substantial, the valuer will calculate the additional value that they add to the property, and then discount this to determine the present value.

To calculate the reversionary value, a value must be ascribed to the property representing its potential sale price once the current term expires.

Most long leaseholders are legally protected and have the right to continue living in the property under an assured tenancy once their lease expires. When valuing leasehold interests with this type of protection, the property's value is often reduced by a percentage – this is because, instead of the landlord receiving a vacant property when the lease ends, they will still have a paying tenant.

4.7.6 Comparative Analysis – Market Indices

Property investors need to be able to measure the returns that they achieve on their investment and compare performance.

For example, the MSCI has various property indices available that track the performance of a range of property assets in several geographies, sectors (eg, residential, healthcare, hotels, infrastructure) and types (eg, direct private property, property funds, derivatives and transaction-linked indices). As their names suggest, the Monthly Property indices are published 12 times a year and the Quarterly Property indices four times a year.

AREF has also developed property indices that measure the quarterly performance of residential and commercial properties located across the UK that are held by collective investment schemes (CISs) offering indirect exposure to UK property.

The Investment Association (IA) publishes performance data for UK-based and FCA-authorised unit trusts and OEICs, as well as exchange-traded funds (ETFs). The property sector is split into two – the 'UK Direct Property' and 'Property Other' sectors – to make it easier for investors to make fair comparisons between 'bricks and mortar' funds and those that are indirectly invested.

The Association of Investment Companies (AIC) publishes performance data for **investment trusts**. The AIC has eight property sector classifications – UK Commercial, UK Residential, UK Logistics, UK Healthcare, Europe, Rest of World, Property Securities and Debt – to ensure its sectors are as clear and helpful as possible for investors.

For UK-quoted real estate company shares, performance is tracked as part of the FTSE All-Share Index for UK equities, published daily in the Companies & Markets section of the Financial Times. Local market indices are also available for company shares listed outside the UK, such as the S&P 500 Real Estate Index in the US and the Euro Stoxx Real Estate Index in the eurozone; these indices are usually published by financial news outlets and data providers such as Bloomberg and Reuters.

In terms of residential property, other organisations (such as mortgage lenders and estate agents) publish their own house price indices based on transactions that they have observed. For example, the Nationwide House Price Index and the Halifax House Price Index track the value of a 'standardised' house in the UK, which has been seasonally adjusted (since house prices tend to be higher in the spring and summer when more buyers are in the market). While these indices can be helpful measures of performance, it should be noted that they can differ from one another over the same period due to different geographical biases and sampling populations, among other reasons.

It is important to understand that property indices are based on valuations and not transaction prices. Therefore, they tend to underestimate the true volatility of the market. Nevertheless, even after adjusting to allow for valuation smoothing and lag, a property's volatility is still lower than that of other assets.

4.8 Indirect Property Investment

Learning Objective

1.6.5 Analyse the factors to take into account when selecting property and property funds: property shares, OEICs, REITs, bonds, trusts, fund of funds, PAIFs, limited partnerships; relative merits of investing through open-ended and closed-ended vehicles; property fund strategies; growth/dividend prospects; direct versus indirect investment; pricing, liquidity and fair value; advantages and disadvantages of investing in property and property funds; environmental, social and governance (ESG) factors; market trends and current conditions

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You should be aware that collective investment schemes (CISs) offer the investor the benefit of indirect exposure to a variety of asset classes.

A number of these can include property – generally commercial, but sometimes also residential. We will take a look at a few of the options available.

4.8.1 Property Company Shares

A variety of property development and property investment companies are listed on the world's stock exchanges. They invest in a wide variety of properties, some undertaking the development of property projects, and some simply seeking to identify and invest in undervalued properties. If the properties are let, the company may pay a dividend income to its investors; however, others that invest in development opportunities may pay no income at all.

The price of the shares may differ from the value of the underlying assets due to supply and demand fluctuations. Gearing (ie, borrowing) by the company can increase the share price volatility.

The share price can be affected by systemic factors affecting the stock market as a whole, as well as factors specific to the company or the property sector.

Compared with direct investment in property, a significant advantage of investing in property through listed companies is liquidity. Investors can easily realise their investment in a listed property company via a stockbroker, as market makers quote prices for all listed stocks.

4.8.2 Unit Trusts and Open-Ended Investment Companies (OEICs)

Originally, unit trusts and OEICs were prohibited from directly investing in property and could only invest indirectly via property shares. Nowadays, they can invest directly in property. At the inception of such a fund, the manager must be confident that they will attract sufficient capital to purchase enough property to establish a well-spread portfolio.

A wide variety of property unit trusts and OEICs are available:

- **Direct property investment** – Some invest directly in property; However, there are restrictions on the proportion of the fund that can be invested in leases with less than 60 years to run or in unoccupied property. Also, there are limitations on holding mortgaged property, thus restricting gearing; and no more than 15% of the fund's total value may be invested in a single property.
- **Indirect property investment** – Others invest in property company shares, property authorised investment funds (PAIFs, see section 4.8.3) and real estate investment trusts (REITs, see section 4.8.5). Indirectly-invested funds can address some of the liquidity challenges faced by direct property investors; for example, if a unit trust holds shares in a listed property fund, it can sell those shares on the stock market to raise cash to meet its investors' redemption needs. Each property unit trust or OEIC will have predetermined redemption procedures, which vary from fund to fund; investors should ensure they understand these procedures before investing.
- **Sector focus** – Additionally, property unit trusts/OEICs may focus on different property sectors (eg, residential, commercial, industrial or mixed use). Others may be niche or sector-specific, such as specialist funds (eg, urban regeneration).

Most property unit trusts and OEICs have a wide property base, therefore offering investors a diversified portfolio of property investments.

As with unit trusts and OEICs generally, investments are redeemed at NAV. However, if many investors sell at one time, the unit trust/OEIC may need to invoke its right to postpone encashment of units/shares until property can be sold – this happened during the global financial crisis and the COVID-19 pandemic, for example. This restriction in accessibility makes property funds potentially less liquid than other funds, although still more liquid than direct investment.

Within the fund, no CGT is charged on gains made from the sale of property. However, investors may be subject to CGT on gains when they sell the units or shares, and losses can be offset against other gains.

In the UK, authorised property funds (including both unit trusts and OEICs) are regulated by the FCA. Like all authorised funds, they can be sold directly to retail investors. They pay corporation tax on their income but do not pay CGT within the vehicle.

In addition, a developing secondary market exists for some property investment funds, allowing the transfer of units/shares between investors on a matched bargain basis. In some cases, this can provide an exit route when the fund's terms are restrictive, or when an investor needs to sell their units/shares promptly, although the liquidity of such markets varies depending on the type of fund.

4.8.3 Property Authorised Investment Funds (PAIFs)

Property authorised investment funds (PAIFs) invest mainly in property, including REITs, and can elect for a special form of tax treatment.

Under the PAIF regime:

- Rental profits and other related income is exempt from tax in the fund and is distributed to eligible investors gross, without tax deducted (called a non-property income distribution, or non-PID).
- Property income is ring-fenced within the fund and all other taxable income is charged to corporation tax at 20% (called a property income distribution, or PID).

Distributions to investors are split into three categories of income: property income, other taxable income (bank interest and non-UK dividends), and UK dividend income.

In order to qualify as a PAIF, the fund must meet several conditions, including:

- the fund must be structured as an OEIC
- at least 60% of the net income of the PAIF must be from the exempt property investment business
- the value of the assets involved in the property investment business must be at least 60% of the total assets held by the PAIF, and
- the shares of the PAIF must be widely held, and no corporate investor must hold 10% or more of the NAV of the fund.

4.8.4 Long-Term Asset Funds (LTAFs)

LTAFs were introduced in 2021 to address the liquidity challenges faced by open-ended directly invested property funds. While investors can redeem shares or units in these funds at any time, it can take several months (if not years) from initial marketing to completion of contracts to sell the underlying properties in order to raise the required cash to pay investors when they redeem their units/shares. By allowing for longer notice periods and more flexibility in managing illiquid assets, LTAFs aim to mitigate these issues and provide a more efficient way to invest in long-term illiquid property assets.

It is worth noting that **closed-ended funds** and open-ended, indirectly invested property funds do not have this liquidity issue:

- **Closed-ended** funds have a fixed number of shares in issue that are traded on the stock market (ie, they do not accept any new money or redemptions). An investor who wants to cash in their position sells their shares to another investor, so the underlying assets do not have to be sold to fund redemptions. That said, illiquidity and other forms of market stress are often reflected in widening discounts (or narrowing premiums), thus highlighting the sensitivity of share prices to market sentiment as well as asset performance.
- For **open-ended**, indirectly invested property funds, the manager sells the underlying property shares (which are liquid assets) in the stock market.

4.8.5 Real Estate Investment Trusts (REITs)

REITs (also called property investment trusts) are tax-transparent property investment vehicles. Initially introduced in the US, they have been adopted by other countries including Japan, the Netherlands and France, and were launched in the UK in 2007. They can provide investors with tax-efficient and diversified exposure to rental properties.

Investment trusts are listed, closed-ended vehicles traded on the stock market, and many invest in the shares of property companies. REITs are, therefore, closed-ended, pooled investments that own and manage portfolios of real estate properties (ie, they offer an indirect holding in property). However, investing in the shares of an investment trust can give exposure to direct holdings.

The share price of an investment trust, including REITs, fluctuates with supply and demand for the trust's shares; this means that they can trade at a discount or a premium to their net asset value (NAV). Further, investment trusts are permitted to borrow, which increases the potential return and risk for investors.

REITs provide investors with tax-efficient and diversified exposure to rental properties. Under the regime, companies carrying on a property rental business benefit from exemptions from corporation tax on property-related income and gains, providing that they meet certain conditions.

To qualify as a REIT, the company must:

- Have only UK residency status (dual residency is not permitted).
- Be listed on a recognised stock exchange, including AIM.
- Offer fully transferable shares.
- Have at least 100 shareholders, with no single shareholder holding 10% or more of the share capital or voting rights.
- Not be a 'close company' (ie, it must be owned by five or more participants).
- Generate at least 75% of its income from rental income.
- Distribute at least 90% of their profits each year to shareholders as dividends.
- Hold at least 75% of the total investments in real estate; the value of any one property should not exceed 40% of the total value of the investment properties.
- Derive its gross income predominantly from rents and other sources that align with the business interest of a REIT. This allows that REITs to gain exemption from paying CGT and corporation tax on property-related income and gains, although investors still pay income tax on dividends and CGT on gains at their marginal tax rates, and losses are allowable.

Further, the ratio of interest paid on borrowings to fund the tax-exempt business must not exceed 1.25:1 to its rental income.

Under the Finance Act (FA) 2024, changes were made to the UK REIT regime. This included amendments to the tax rules applying to REITs, including some conditions that determine whether a company qualifies as a REIT. For example, the rule requiring a REIT to hold at least three properties was removed, provided that it owns a single commercial property valued at £20 million or more. Additionally, the rule concerning the disposal of properties within three years of significant development has been amended to refine when such disposals fall outside the tax-advantaged property rental business.

Similarly to PAIFs, REITs may pay dividends as a PID, a normal dividend, or a combination of the two.

Therefore, REITs offer similar benefits to investors including tax transparency, potentially high-yield returns and access to property with minimal initial investment. REITs typically feature low/controlled gearing, thus providing a safer investment approach; and offer portfolio diversification due to their low correlation with equities and bonds. Additionally, they provide liquidity, making it easy for investors to buy/sell, while also maintaining strong corporate governance.

4.8.6 Property ETFs

There is a range of ETFs that track the performance of real estate indices around the world without the risks (or benefits) of active fund manager selection. Note that property ETFs are unlikely to invest in actual bricks and mortar; instead, they usually give access to housebuilders, construction companies, and/or real estate investment trusts (REITs). Property ETFs are traded on the stock exchange, as with other ETFs, so offer the benefits of liquidity and should trade close to their NAV.

4.8.7 Life Assurance Property Bonds

Life companies offer property bonds – these are not debt securities as covered in section 2 of this chapter, but rather a type of life policy giving investors exposure to various asset classes. Property is among the range of asset classes to which exposure can be obtained through a life policy or insurance-based pension product. The value of the benefits paid under the life policy is directly linked to the NAV of the properties held. A life fund is not permitted to borrow.

In addition, most 'with profits' funds operated by life companies include an element of property exposure in their portfolios.

Although life products are more liquid than direct investments in property, life companies retain a right to postpone the encashment of units (and therefore the payment of benefits under the policy). This could come into effect if several investors wished to encash their bonds at the same time, necessitating the sale of properties – a process that could take some time. This condition was invoked by several life companies during the global financial crisis.

Income and capital gains are subject to tax within the fund at 20%. This cannot be reclaimed by non-taxpayers, and both higher rate and additional rate taxpayers will pay further tax. The tax treatment of holdings accessed through a policy is, therefore, different from that for collective investment schemes and listed property shares.

In addition, the policy carries insurance benefits for the policyholder.

4.8.8 Offshore Funds

Many property funds are established in offshore or international financial services centres such as the Isle of Man, Cayman and Dublin. This may provide certain tax advantages, although offshore vehicles are not advantageous for every investor, and some can be positively disadvantageous. In many cases, it is because of the more relaxed regulations in those jurisdictions which may mean that the fund must comply with fewer rules in terms of diversification and the levels of liquidity it has to maintain, or in terms of how the assets are held. Offshore funds are covered in more detail in chapter 5, section 4.1.

4.8.9 Funds of Funds (FoFs)

One of the investee funds in which a fund of funds (FOF) invests, may well focus specifically on the property market. This provides the investors in the FOF vehicle with a measure of exposure and access to specialist expertise in this asset class.

FOFs may hold one or several underlying property funds, which may be directly invested in bricks and mortar. Investors should therefore be aware of liquidity issues, should those property funds be suspended or undergo dramatic price swings to limit outflows during market stress.

4.8.10 Limited Partnerships

In some cases, the fund vehicle for investment in the property market may be established as a partnership vehicle (as opposed to a unit trust or company). Such vehicles are usually aimed at direct investment in the property market and are targeted at the wealthier or more experienced investor. Their tax treatment is rather different from trust or corporate-based investment vehicles since the tax authorities 'look through' the vehicle to a greater extent.

4.9 Property Fund Strategies

The strategies that indirectly invested property funds (whether active or passive) may employ are the same as for equity funds, as covered in section 3.9.1. By their nature, passive funds can only invest in listed shares rather than in directly held properties.

In contrast, directly invested property funds can only be actively managed. With such funds, the strategy broadly falls into three categories: residential, commercial, or agricultural. This is then segmented into areas such as property development, residential buy-to-let, offices, shops, factories, warehouses, and so on.

4.10 Growth and Dividend Prospects

Broadly, the growth and dividend prospects of a property fund will depend on whether it is invested directly (eg, bricks and mortar) or indirectly (eg, property company shares).

For directly invested funds, the fund's potential for returns from both rental incomes and capital growth will be determined by the underlying physical property asset. Recall that the health of the property market is tied to the health of the economy: when the economy booms, so do property values, and vice versa.

For indirectly invested funds, the returns generated by the fund will be determined by those of the underlying companies. For example, share prices are driven by a variety of factors, including financial results, the skill (or otherwise) of the management team, and the political and economic climate, as discussed in section 3.6.1.

4.11 Direct versus Indirect Investment

The table below summarises the main characteristics of direct and indirect investment in property.

Direct Investment	Indirect Investment
• Involves buying and managing actual physical properties – either to make money from rental income in the short term and profit on the sale, or to buy the property for less than market value, make improvements and sell it for a profit soon thereafter. • The purchase typically requires a large capital investment at the outset and, often, it can rely on bank lending and mortgages. • Substantial amounts of capital are required to achieve a sufficiently diversified portfolio. • Bricks and mortar property is an illiquid asset class. • Higher associated costs – eg, stamp duty, solicitor/legal fees, mortgage interest, and ongoing maintenance and management. • Tax reliefs may be available (eg, business relief) and, for some, the ability to defer tax. • The timescale to generate a return can vary. For example, it may take years of constant rent collection on a let property before a profit is generated. Alternatively, it could be a matter of months to buy, renovate and sell it for a profit. • No two properties are the same. • Direct investment requires extensive knowledge of local markets, property values, the legal process and financial analysis.	• Investing in the shares of companies that own, manage or develop property, or in a fund that invests in such companies. • There can be a clear split between active and passive opportunities. • Indirect investment has a significantly lower financial entry point than direct investment. • Diversification can more easily be achieved. • Improved asset liquidity with indirect than direct investment. • Lower management costs. • Tax reliefs are not available. • The timescale to generate a return can vary. For example, it could only be a matter of months for an indirect property development project to generate a return. Conversely, investors may not see returns for several years in a market downturn. • One share in a particular property company is the same as another. • Investing in a company's shares requires knowledge of the company's business and general market conditions, for example, with funds, this responsibility is ceded to a fund manager (although the investor still needs to select a fund that suits their needs).

4.12 Advantages and Disadvantages of Investing in Property and Property Funds

The table below summarises the main advantages and disadvantages of investing in property and property funds.

Advantages	Disadvantages
• Potential for high cash flow (from rental income) and capital appreciation. • Provision of a consistent and stable income (provided the property is let to tenants that pay their rent on time and without issue, or a 'guaranteed rent' agreement is in place). • Returns can provide a hedge against inflation, in terms of capital and income (for leases that include 'upward only' clauses). • Direct property has historically demonstrated low correlations with other asset classes, and so provides investors with the ability to diversify their portfolios. • The property sector offers a broad range of different property types – residential, commercial (eg, offices, factories, warehouses) and agricultural. • Tax reliefs and benefits may be available. • Some investors are comforted by having a tangible asset that they can see and touch. • Passively managed property funds provide investors with a low-cost way of obtaining exposure to the property market.	• If the property is located in a poor area (eg, one with a great risk of floods) then it may take years before returns are realised (if at all). • Even if tenants are screened when they apply to rent the property, it is difficult to gauge how they will behave once their application has been accepted. • Physical properties are illiquid, as are 'bricks and mortar' open-ended funds, which can be disadvantageous to investors who require the cash on an urgent basis. • While the shares of property companies are more liquid, they have historically been correlated with broader equity markets, so diversification benefits may be limited. • For a direct property portfolio, maintenance is timely. If the investor owns many properties located in different areas, then it may be difficult to manage them all. • The management and maintenance of a property requires time and effort, as does the maintenance of accounts for the purposes of completing a tax return. • Mortgaged properties may experience difficulties in a rising interest rate environment.

4.12.1 Relative Merits of Investing Through Open- or Closed-Ended Vehicles

Diversification

Funds usually contain a wide variety of stocks, bonds and/or other securities issued by companies and governments from within a specified sector/country/region or around the world. Investors become part owners of numerous securities and are therefore diversifying their holdings. If one security drops in value, it does not necessarily hurt them much, as one of the other securities in the fund may grow in value. In contrast, when investors buy individual securities, their returns depend more on one area of the market performing well.

Professional Management

Investors can manage their own finances by choosing securities through online brokerage firms. However, managing money can be time-consuming, especially if they are not financial experts. In this case, they must spend hours researching their options to understand them.

Open- and closed-ended funds are controlled by fund managers, who are responsible for buying and selling securities. These professionals manage funds using a variety of different investment styles, which is covered in more detail in chapter 5.

Liquidity

Direct investment is generally illiquid due to the time and cost involved in selling them. Further, physical property is generally indivisible – if the investor wants to realise a small part of their portfolio, they cannot sell, say, only the bathroom of one of their residential properties; they could perhaps sell one flat in a block of flats they own, but this might be uneconomic in terms of breaking up the value of the property as a whole.

In contrast, property funds are more liquid, allowing investors to redeem their shares or units quickly. However, property funds may still face liquidity risks, particularly open-ended funds (eg, unit trusts and OEICs), especially during periods of market stress. Open-ended, directly invested funds are, therefore, required to hold some cash for liquidity purposes, although they may struggle to meet redemption demands during market downturns.

To address this, the FCA has introduced several rules for such funds, including mandatory disclosure of liquidity risks and a requirement to suspend trading if an independent valuer is unable to value at least 20% of the fund's assets. More recently, in 2021, the FCA introduced the LTAF, as discussed in section 4.8.4. Therefore, directly invested property funds should not be recommended to investors with immediate or near-term liquidity needs.

Open-ended property funds may also switch their pricing basis (from offer to bid pricing or vice versa). This is often a sign of changing fortunes for property portfolios. An offer to bid price switch aims to ensure investors will not suffer from increased transaction costs should assets be sold to meet redemptions.

For closed-ended funds such as REITs, discounts to NAV may reflect investor concerns such as expectations of falling property values, deteriorating market sentiment or rising interest rates. However, these market-driven discounts do not necessarily indicate forced selling or immediate declines in underlying asset values; rather, managers of closed-ended property funds have the flexibility to hold onto assets during periods of stress, allowing them to preserve long-term value even when short-term market sentiment diverges from fundamentals.

4.13 Pricing and Fair Value

Unlike other financial assets, most commercial real estate does not trade on an exchange with openly quoted prices. Professional valuers are used to estimate the likely selling price of an asset. This process combines financial information about the property with market data to achieve a balanced, evidence-supported assessment of its price. The valuer uses their expert knowledge and experience of the market to make a judgement.

For example, the RICS Appraisal and Valuation Standard 'Red Book', as covered in section 4.6 of this chapter.

To some extent, this reflects the imperfect nature of market information (ie, the seller may know more than the buyer, or vice versa). It can also reflect different views about the future prospects for the property itself and how the market is likely to perform.

4.14 Environmental, Social and Governance (ESG) Factors

In recent years, ESG has gained prominence with respect to investment decisions and the determination of capital allocation. Global real estate is no exception.

Buildings are inherently energy-intensive with materials such as brick, plaster, and cement requiring large amounts of energy for production. The building and construction industry therefore represents about 37% of global operational energy and process-related carbon dioxide (CO_2) emissions (eg, from the manufacture of concrete, steel and aluminium used in construction)[26].

Developers and constructors are therefore facing increasing pressure from governments, regulators, lenders, investors and insurers to make buildings that are sustainable in both their construction and operation, in line with global climate and environmental targets. This pressure aligns with the **United Nations (UN) Sustainable Development Goals (SDGs)** particularly, SDG 11, which promotes sustainable cities and communities. See chapter 2, section 3.10 on the SDGs.

To reduce their environmental impact, developers can use recyclable materials, increase green spaces, implement energy-efficient systems, install solar panels, refurbish buildings with energy- and water-efficient appliances, and engage tenants on their environmental impact.

Green building certifications help developers to validate their efforts, and provide a benchmark for comparing ESG strategies.

Social initiatives can be harder to quantify. Developers are encouraged to create programmes that attract and retain employees and tenants, provide collaborative spaces, prioritise occupant wellbeing with modern infrastructure, and ensure safe access to public transport. Additionally, governance policies are increasingly important, focusing on tenant and community engagement, transparency and accountability.

26 Global Alliance for Buildings and Construction, 2024. Global Status Report for Buildings and Construction. Retrieved from https://wedocs.unep.org/bitstream/handle/20.500.11822/45095/global_status_report_buildings_construction_2023.pdf (Accessed: February 2025)

4.15 Market Trends and Current Conditions

The COVID-19 pandemic has significantly impacted the global residential, commercial and industrial property markets, with lasting effects expected.

4.15.1 Retail Property

Even before the pandemic, high street shopping was on the decline, driven by an increase in online shopping and the ongoing digitalisation of modern life such that consumers from almost every corner of the globe were making online transactions. The pandemic accelerated this trend, as lockdowns forced high street shops to close, and many (including major brands) shut down permanently.

Although economies have reopened, consumer behaviour has fundamentally changed, with online shopping continuing to dominate. According to Statista, global retail e-commerce sales worldwide in 2024 reached $6.3 trillion, or 3.7 times more than the amount in 2014[27]. This shift has led to a sharp increase in demand for warehouse space for storing goods, and logistics services to handle packaging and order dispatching.

4.15.2 Offices

During the pandemic, many firms adopted remote work to reduce virus transmission. This trend has become permanent for some companies, with full- or part-time working-from-home arrangements gaining approval (although others are planning to end it entirely, or have already done so).

As people spend more time at home, they are rethinking what they want in their living spaces, such as larger homes with outdoor areas. This has led to a noticeable trend of relocation to rural areas, although a return to city living may occur if more companies fully discontinue remote work policies.

4.15.3 Agricultural Property

The agricultural property market has largely been insulated from the impacts of the pandemic, although there were some noticeable exceptions – for example, farms reliant on human labour faced challenges, with billions of dollars' worth of food going to waste in the worst-case scenarios. Despite this, the pandemic has drawn attention to the importance of agriculture in sustaining the global population and highlighted the need for a resilient agricultural sector.

27 Statista, May 2024. Retail e-commerce sales worldwide from 2014 to 2027. Retrieved from https://www.statista.com/statistics/379046/worldwide-retail-e-commerce-sales/ (Accessed: February 2025)

5. Other Assets

Learning Objective

1.7.1 Understand the purpose, characteristics, risks and returns of the main types of alternative investments: gold and other metals; commodities; art; antiques; land – agricultural and development; cryptocurrencies, non-fungible tokens (NFTs) and other digital assets

1.7.2 Analyse the factors to take into account when investing in alternative investments: direct versus indirect investment; investment time horizon; transaction, delivery and ongoing costs; pricing, liquidity and fair value; advantages and disadvantages of investing in alternatives

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The term 'alternative investments' is broad, and there is no single definition as to what makes an investment 'alternative'. Broadly, they are investments that fall outside the traditional asset classes of equities, bonds, cash and property, or involve strategies that go beyond conventional methods. These can include physical assets, sometimes referred to as collectibles (when used for investment purposes) or chattels (which are tangible, moveable objects).

Despite their diversity, alternative investments share some common features, including the following:

- They rely less on broad market trends and more on the strength of the specific investment.
- They can be difficult to value.
- They have historically demonstrated a low **correlation** of returns with traditional investments.
- They possess relatively low liquidity compared with traditional investments.
- They are less regulated and less transparent than traditional investments.
- Costs and fees are often high, and some alternative investments also require a minimum investment amount.
- They have unique legal and tax considerations.
- Redemption in some alternative investments is restricted.

Alternative investments include (but are not limited to) jewellery, antiques, books, art, classic cars, autographs, posters, coins, stamps, comic books, toys (if they are in good condition and in the original packaging), racehorses, fine wine, precious metals, and memorabilia (eg, commemorative items).

While physical assets tend to be popular with collectors, they do also have the potential to appreciate substantially in value. They are not exclusive to wealthy clients, and due to the wide variety of options available, even modest investments are possible – many people have a collection of coins or stamps, for example, and can find to their surprise that they have amassed a portfolio of reasonable value over time.

Some chattels can make good investments, so may go up in value. However, there may be disadvantages.

Advantages	Disadvantages
• As they rely less on broad market trends, alternative investments can add diversification to a portfolio and potentially reduce overall risk. • Some alternatives have historically demonstrated low levels of volatility relative to other asset classes, so they can improve the risk/return profile of a portfolio. • There is a broad universe of investments and strategies from which investors can choose, and each of which has unique characteristics. • They offer significant upside potential. • Many alternative investments are becoming increasingly accessible to retail investors. • Investors may have fun in selecting the items they wish to invest in (eg, works of art) which can brighten the home as well as provide a potential profit. • As well as the potential for growth, there is the pleasure to be had from owning a rare object.	• They often suffer from illiquidity and can be difficult to sell quickly if funds are required for other purposes. • It may be hard to get a true valuation. • Prices can change rapidly as markets are subject to trends and fashions. • These objects rarely generate income (unless they can be hired out to museums and the like). • Dealers' charges tend to be quite high. • Special and secure storage may be required, again at a cost. • There is the risk of fire, theft, damage or flood to be insured against. • There is little or no regulation in the market. • It is usually not possible to buy chattels via a pension or other tax wrapper. • The item may prove to be a forgery, and next to worthless. • These are high-risk sectors and the value can go down as well as up, as fashions and demand change. Research and careful selection of pieces are a must.

5.1 Art

Investing in art sounds so civilised: perusing the catalogues of the country's best-known auction houses looking for a personal masterpiece or hunting through flea markets in the hope of hidden treasures. In reality, the world of art is not an easy one for amateurs to navigate. For one thing, it is immense, and knowing what you are looking for can be incredibly difficult, even for experts.

Getting to grips with artists, with movements, with genres and periods is one part of the problem, and becoming competent at choosing where to invest can take a very long time, and it is not just the artists that investors need to get to know: the subject matter is key to a painting, or indeed a photograph's value. A brilliantly painted portrait of the artist's wife, for example, could not rival a quick self-portrait by Pablo Picasso in terms of value. Similarly, photographs of famous people, places and events will often be more saleable than more obscure, albeit attractive scenes. Unfortunately, buying a new artist's work and hoping it will be worth more when they hit the big time cannot be directly compared with investing in a small company early and cashing in later.

Young, talented artists will often have a dealer who will make sure the prices are set at the right level. Tactics such as driving up the bidding at auction can often make finding a bargain difficult. Fairytale-like stories of paintings being bought at auction for next to nothing and sold on for a fortune make auctions more alluring. However, not everyone is that lucky, and buying at auction is expensive, with fees to be paid to the auction house by both the buyer and seller, sometimes at up to 20% of the price. A painting will have to appreciate substantially in value if one is to make money from it.

The main trouble with investing in art is that it is very difficult to get an accurate valuation. At auction, rival bidders who want the same piece can quickly push the sale price beyond all estimations, which can clearly work in an investor's favour if they are the seller.

5.2 Antiques

Antiques are among the most tangible alternative assets. Like works of art, they are collected for their aesthetic appeal as much as their value, and investment is a medium- to long-term venture. The trick is for investors to choose a style and period they like best and stick to it, because collections of similar pieces are more likely to increase in value than a mishmash of items.

Assets should be examples of fine craftsmanship and be in good condition. To maximise profit, investors should seek to acquire items that they feel may become popular in the future, rather than buying items that are already fashionable and expensive.

Indirect investment in art and antiques can be achieved by investing in businesses which operate in these markets.

5.3 Commodities

Commodities are often split into two broad categories:

- **Hard commodities** – this generally relates to metals (including precious metals) which require substantial capital expenditure to extract from the ground. These commodities are finite resources. The demand for some metals is dependent on specific industrial conditions.
- **Soft commodities** – these are agricultural products including wool and cotton, and food items such as meat, cocoa, coffee, soya and sugar. 'Softs' have the characteristic of being renewable (usually on an annual cycle) and perishable, which can make their price highly volatile.

For those keen to invest in commodities, there are several options available. They can spread bet on moves in the relevant index, although this is not for the faint-hearted as potential losses incurred are unlimited and may exceed the initial investment. They can also invest in individual mining companies, but they are not really going to be able to spread their risk adequately (unless they have a lot of money to play with). A fund specialising in natural resources or commodities may be more appropriate.

5.3.1 Precious Metals

During times when inflation has soared, currencies have weakened and stock markets have plummeted (such as during the current period of instability), precious metals have been seen as more attractive. The degree of their attractiveness seems to directly correspond to the level of fear in the markets.

Gold has always been regarded as intrinsically valuable, accepted internationally and negotiable. Many investment portfolios have a small percentage invested in gold, although investing in precious metals can be complex. Gold prices are dependent on the wider conditions of market for bullion.

Gold prices can fluctuate due to political and international events, and changes in specific countries. They are open to speculation, as well as changes in technologies involving gold, such as usage in the automobile industry. Depending on how the investor chooses to invest in gold, there may be costs of ownership too. For example, banks may apply holding charges for precious metals, and there are no dividends to be earned from gold investment, per se.

Investment in precious metals is also open to fraud, with investors advised to purchase their precious metals through banks or reputable dealers. Investment in gold can catch out unwary investors, with large quantities being stolen by criminal gangs, involved in fraud or otherwise being of dubious origin or purity. Demand for gold is variable and subject to fluctuations influenced by the factors discussed above.

Due to their volatility, precious metals should represent a small portion of an investor's portfolio relative to some other asset classes (although the actual allocation will depend on the investor's attitude to risk and investment time horizon, among other considerations). The most conservative way to go into precious metals is through a unit trust, OEIC or investment trust – such funds are professionally managed, diversified and often particularly well suited to new investors.

The drawback to holding precious metals is that they increase in value only when the price per ounce goes up; by contrast, stocks and bonds can pay dividends and offer other income sources. If conditions for gold are poor, it can sit for years doing virtually nothing.

There are five principal ways to invest in gold and precious metals:

- tangible coins and bars
- certificates
- precious metals mutual funds
- stock in mining companies, and
- gold and metals futures.

5.4 Land – Agricultural and Development

Investors in land include those who seek to generate an income by renting the land to farmers who may then grow crops, plant trees, or raise farm animals on it in order to generate a profit. Others may purchase land and speculate by gaining planning permission to build residential or commercial property, which then increases its capital value.

The investors may sell the land to a property developer in return for a capital sum, or retain the freehold and draw an income from the future ground rents. Investors in land need to be comfortable with the reduced liquidity compared to other listed assets, such as equities; transaction costs will also be much higher. However, land provides diversification benefits within a portfolio as the value is not affected by market forces in the same way as bonds and equities.

5.5 Cryptocurrencies, Non-Fungible Tokens (NFTs) and Other Digital Assets

5.5.1 Cryptocurrencies

The wake of the global financial crisis saw the creation of cryptocurrencies, as a way for individuals to control their own money without having to rely on companies, banks or governments. At the time, blame for the financial crisis was primarily attributed to the imprudent actions of bankers and politicians. Many individuals were, therefore, upset by the way in which they had to implicitly trust banks and governments with their hard-earned money.

Cryptocurrencies are virtual or electronic currencies which (as their name suggests) use encryption technology to control the amount of currency issued as well as to record ownership and payments. The first established cryptocurrency, Bitcoin, was created in 2009. Estimates of the current number of cryptocurrencies vary widely, ranging from around 9,000 to approximately 20,000[28]; notably, with the higher estimate, many of these cryptocurrencies are either not significant, inactive, or discontinued. Cryptocurrencies have a total market capitalisation of about $3.2 trillion, of which the top 10 make up about 90%[29].

Investors wishing to participate in the cryptocurrencies market must first set up a password-protected digital wallet. Here, they may securely store their coins or tokens, which they may acquire in one of the following ways:

- Purchasing them in exchange for flat currencies ('transaction').
- Earning them; for example, by publishing blog posts on platforms that pay users in cryptocurrency.
- Through mining (cryptomining) by solving mathematical problems to generate new cryptographic keys.

While cryptocurrencies may go up in value, they are high risk and speculative, so it is important that investors understand the risks before they start trading:

- **Volatility** – it is not uncommon for the value of cryptocurrencies to fluctuate by hundreds, or even thousands, of US dollars. This can be driven by many factors including varying perceptions of their intrinsic value as a store of value, unexpected changes in market sentiment, and security breaches.
- **Decentralised** – many cryptocurrencies are decentralised networks whereby investors deal directly with each other, rather than operating from within a centralised exchange. While this allows users to eliminate any counterparty risk linked to a centralised exchange, volumes and liquidity are low.
- **Unregulated** – cryptocurrencies are largely unregulated by both governments and central banks. That said, the growth of the cryptocurrencies market for financial transactions has led to discussions about ways in which regulation could be introduced. For example, 'wallet providers' (ie, firms that provide services to safeguard cryptoassets) operating in the UK must register with the FCA and comply with regulatory rules, including the Fifth Money Laundering Directive (5MLD). In Japan, cryptocurrency exchanges must register with the FSA and comply with AML regulations.

28 Statista, January 2025. Number of cryptocurrencies worldwide from 2013 to January 2025. Retrieved from https://www.statista.com/statistics/863917/number-crypto-coins-tokens/ (Accessed: February 2025)

29 CoinMarketCap, 2025. Today's Cryptocurrency Prices by Market Cap. Retrieved from https://coinmarketcap.com (Accessed: February 2025)

- **They are not reserve-backed** – while traditional currencies are backed by the governments that issued them, cryptocurrencies are typically not backed by any tangible assets.
- **Scalability** – mining is energy intensive, requiring extensive computer resources.
- **They are susceptible to human error, technical glitches and hacking** – cryptocurrencies are often not protected under any investor protection scheme (eg, the Financial Services Compensation Scheme (FSCS) in the UK), should individual investors incur losses as a result of scams, hacks or theft.

In terms of their tax treatment, most investors will likely buy and sell cryptocurrencies as an investment activity, so any gains on disposal will typically be subject to CGT (even though they are digital and, therefore, intangible). Additionally, losses will be allowable (ie, they may be used to offset chargeable gains realised on other assets), although investors will have to provide proof of the loss if it arises as a result of the accidental destruction of a private encryption key or fraud.

While cryptocurrencies are welcomed in many countries, some are wary of their volatility and decentralised nature. As a result, some regulators (such as the UK's FCA) have restricted cryptocurrency promotions to retail consumers to protect them from potential losses and harm. Others are concerned about their use to support illicit activities such as money laundering, terrorism and drug trafficking; hence, several nations (eg, China, and Saudi Arabia) have outright banned cryptocurrency and made its use illegal.

In 2025, HMRC and the FCA took significant steps toward shaping a clearer and more comprehensive regulatory framework for cryptoassets in the UK. In April 2025, HMRC released a draft statutory instrument to bring cryptoassets into the FCA's regulatory perimeter, laying the groundwork for new regulated activities such as operating a crypto trading platform. Then in May 2025, the FCA published Discussion Paper DP25/1, seeking views on how to regulate crypto trading platforms, intermediaries, lending, staking, decentralised finance (DeFi) and the use of credit to purchase cryptoassets. The FCA's 2025 roadmap signals a shift from fragmented oversight to a structured regime that could position the UK as a global leader in responsible crypto innovation.

5.5.2 Non-Fungible Tokens (NFTs)

Generally, with alternative investments, investors end up with a tangible item such as a painting, an antique or a collection of coins. Non-fungible tokens (NFTs) are like physical collectors' items, except they are digital.

More specifically, NFTs are unique digital tokens in the blockchain network. Each NFT can be associated with a particular physical object or a digital asset and a licence to use that asset for a specific purpose.

The term 'non-fungible' means the item is unique and cannot be replaced with something else. In other words, each NFT token is uniquely identifiable – this is one of the key differentiating features of NFTs from cryptocurrencies, where all units of a particular cryptocurrency are of equal value.

Another difference is that, unlike cryptocurrencies, NFTs do not possess monetary value, rather, their value is based on what another investor is offering to pay for it.

Example

Twitter CEO Jack Dorsey's first tweet – written at the launch of Twitter in 2006 and reading 'just setting up my twttr' sold for $2.9 million in 2021 (notably, at an auction in April 2022, the highest bid was only $280). A unique piece of computer code (ie, the NFT) was attached to the downloaded tweet.

Once purchased, the NFT is stored on a database (ie, the blockchain) to prove ownership of the asset. The NFT could, therefore, be considered as being the cyber version of a deed to a house or a piece of land – you cannot actually take the house or land with you, so you are handed a deed that signifies you own it.

NFTs can be traded and sold on digital markets. However, ownership of an NFT does not inherently grant copyright or intellectual property rights to the asset that the token represents.

There are several risks associated with NFTs, including the following:

- Similarly to cryptocurrencies, NFTs are vulnerable to theft by hackers, cyber threats and online fraud risks. NFTs and NFT stores may look authentic, but they may actually be counterfeit/fake.
- The seller of the NFT may not actually own that NFT; in which case, the buyer may only receive the right to use that NFT, but not the intellectual property rights.
- NFTs are not regulated, so investors are unlikely to be protected by a protection scheme (eg, the FSCS in the UK) should something go wrong.
- The value of an NFT will depend on the creativity, uniqueness, scarcity of the buyers and owners, among other factors. It is, therefore, difficult to determine their value.
- There is no legal definition of an NFT. This is necessary in order for rules and regulations to be set, in order to protect investors.

5.6 Liquidity and Investment Time Horizon

Alternative investments often involve a high degree of risk, and can suffer from illiquidity due to restrictions on transfer and a lack of a secondary trading market. For some, redemptions are restricted – for example, hedge funds usually impose an initial lock-in period of between one and three years before investors can sell their investments.

All in all, this can make alternatives difficult to sell quickly if investors require the proceeds for other purposes. Therefore, they are only suitable for investors with a tolerance for illiquidity, who can remain invested for the long term.

Liquid alternative investments (or liquid alts, for short) are collective investment schemes that aim to provide investors with diversification and downside protection via investment in highly liquid alternative investment strategies (eg, commodities, currencies and hedge funds). While they can be bought and sold daily (unlike traditional alternatives), they are subject to unique and often opaque risks, and can be prone to closure during volatile markets.

5.7 Transaction, Delivery and Ongoing Costs

As we saw at the start of section 5, alternative investments typically have higher costs compared with traditional investments. The costs incurred depend on the type, amount, complexity and size of the alternative investment, and the ongoing services provided after purchase.

With regard to physical assets, investors should consider the one-off and ongoing costs, which may include:

- storage (either at home or rented elsewhere) – specialist units may be required, such as wine storage and indoor classic car storage
- insurance, to protect against the risk of theft, fire, flood or damage
- delivery costs, to cover transportation, packaging costs and insurance in transit, and
- dealers' charges, which tend to be quite high.

An alternative investment fund (AIF) is a collective investment scheme in which assets are pooled together from several investors and invested into assets that traditional funds do not invest in, in accordance with the investment policy. Such funds typically have high fee structures and minimum investment levels, particularly when compared to traditional funds.

For example, most hedge funds require minimum investments in excess of £50,000, with some exceeding £1 million. They typically levy an annual management fee of 2%, in addition to a performance-related fee of 20% (called a '2 and 20' approach) – see chapter 5, section 11 for more information on hedge funds. Liquid alternatives typically have lower minimum investment levels than hedge funds (although still high relative to traditional funds).

Transaction costs for alternatives tend to be lower than traditional assets, due to the long investment time horizons involved and, in turn, lower levels of turnover.

5.8 Pricing and Fair Value

Also in section 5, we touched upon how alternative investments can be difficult to value accurately.

Given the high prices that some types of alternative investments can command (eg, art, antiques and classic cars), an important consideration before making any purchase is the value of that item. Therefore, one of the vital questions to be considered is: how does someone determine a fair market price for that asset?

There is a long list of factors that influence the price of an alternative investment. Generally, these factors include current market strength (ie, demand) and scarcity (ie, supply). Regarding the former, some alternative investments may be subject to unpredictable demand patterns.

There are also specific considerations. For example, for fine wine, the region, general appeal of the vintage, age, popularity of the producer and critic scores will also have an effect. The value of antiques is influenced by their rarity, age, condition and provenance. For classic cars, the make and model, specification, service history and mileage affects their value. Therefore, valuation requires specific and expert knowledge in the relevant field. In this regard, it may also be a matter of the valuer's opinion as to what the value of the asset is unless, and until, it is sold.

For AIFs, managers must adhere to the concept of 'fair value measurement' (FVM) when determining the value of the securities held within the fund. This requires that assets are simply kept at cost or a constant value over multiple accounting periods, particularly during times of market volatility. For those investing in private company shares, there are three main factors to base the valuation of a businesses on:

- **Asset value** – the value of the company is assumed to be the value of its assets less its liabilities (ie, its future earning potential is not taken into account). The amount calculated represents how much would be left for shareholders should the company sell its assets at market value and settle its liabilities.
- **P/E** – the value of the company is calculated by applying an earnings multiple to the normalised or underlying profit of the business. Ideally, this multiple would be based on a published P/E ratio applicable to an equivalent quoted company; that said, difficulties can arise in trying to find one. This method is one of the most widely used valuation techniques for private companies.
- **Cash flows** – an estimate for the value of the company is based on its expected future cash flows, discounted to present value to reflect the time value of money (see chapter 3, section 1) and risk. As this method relies on future trading performance, it is subjective if forecasts are not robust and reliable.

5.9 Direct versus Indirect Investment

The asset mix of a portfolio is an important consideration as it can be a key determinant of its risk/reward profile. A blend of assets such as equities and bonds have, over the long term, smoothed out variability of returns, and shielded investors from significant losses during turbulent times.

The 60/40 allocation (ie, 60% equities and 40% bonds) has long been suggested to be neutral for an average investor under normal market conditions. However, it is hotly debated by asset allocators if it is still fit for purpose. Historically, central banks would reduce interest rates to combat economic weakness, which increases bond prices while lowering share prices. However, there have been periods where equity and bond prices moved in unison – most notably in 2023, when they experienced their strongest correlation in decades[30]. When these assets move in almost perfect lockstep, investors have relatively few places to hide in falling markets, therefore increasing risk levels within a portfolio. As a result, many investors are now venturing into alternative assets.

Similarly to other investments, an allocation to alternatives can be achieved either by direct investment, indirect investment, or by a combination of both. However, it is unlikely that a single asset or investment fund will meet a client's requirements; rather, diversifying across a range of alternative asset types helps to manage risk (although the underlying type of alternative used and the overall allocation will depend on the client's objectives and risk profile, among other considerations).

30 Reuters, January 20254. US 'landing' key to stretched equity/bond correlation. Retrieved from https://www.reuters.com/markets/us-landing-key-stretched-equitybond-correlation-mcgeever-2024-01-11/ (Accessed: February 2025)

Key Chapter Points

- Fixed-interest securities (eg, bonds) carry more risk than holding money in a deposit account, because their capital value varies. Changes in interest rates and other economic factors, as well as changing market sentiment, can affect bond prices.
- Bonds include those issued by governments and companies (corporate bonds).
- High yield bonds (issued by issuers with lower credit ratings) typically have higher yields than investment grade bonds (issued by issuers with higher credit ratings), reflecting the different levels of default risk.
- If held to redemption, the cash flows of bonds are known, assuming the issuer does not default.

- Ordinary shares and preference shares differ in their dividend rights, in the rights they give over control of the company, and in their priority of entitlement to assets on a liquidation.
- Preference shares act more like a bond than an equity, as dividends are expressed as a percentage of the nominal value of the shares. Preference shareholders rank above ordinary shareholders in the event of liquidation.
- Ordinary shareholders are often known as equity or risk capital, as they rank last in the event of liquidation. However, any money that is left over after all creditors and preference shareholders have been paid belongs to the ordinary shareholders.

- Property should be selected with care. All costs and possible void periods should be fully evaluated.
- Property investors generally invest for an income stream, capital gains or both. However, the use of gearing means that a downturn in the market could severely affect property values.
- Residential, commercial and agricultural property all have their unique characteristics, and some exposure may be considered by investors seeking to diversify across various asset classes.
- Indirect (or pooled) investment allows relatively small sums to be invested in a diversified portfolio of properties, and there can be much more liquidity than with direct investment.
- Offshore life companies also offer a similar range; in addition, some offer portfolio bonds (where the policyholder can tailor the investments to which their benefits are linked) and capital redemption bonds, where there is no life assured.

- The term ‘alternative investments’ is broad and there is no single definition as to what makes an investment 'alternative'. Broadly, they are investments in assets other than equities, bonds, cash and property, or involve strategies that go beyond conventional methods.
- A variety of specialist investments can prove rewarding but are higher risk, often illiquid or hard to value, and usually only suitable for experts.

- Environmental, social and governance (ESG) has gained prominence with respect to investment decisions and the determination of capital allocation across a broad range of asset classes.

End of Chapter Questions

Think of an answer for each question and refer to the appropriate workbook section for confirmation.

1. **What rate is used to compare the interest paid on different savings and investments?**
   Answer reference: Section 1.2.3

2. **What protection is in place for deposit holders in the UK?**
   Answer reference: Section 1.7.1

3. **What type of bond provides coupons and maturity proceeds that are linked to the rate of inflation?**
   Answer reference: Section 2.1.4

4. **What form of zero coupon debt securities are used to manage the government's cash flow?**
   Answer reference: Section 2.2.4

5. **The holders of which form of share rank last for any surplus remaining after the liquidation of a company?**
   Answer reference: Section 3.4.4

6. **What form of corporate action results in an increased number of shares in issue without raising any additional capital for a company?**
   Answer reference: Sections 3.5.2 and 3.5.4

7. **What are the three main types of equity market index?**
   Answer reference: Section 3.7

8. **What is the difference between active and passive investment management strategies?**
   Answer reference: Section 3.8.1

9. **How is the rental yield for an investment property calculated?**
   Answer reference: Section 4.2.1

10. **What requirements must a closed-ended fund satisfy to qualify for real estate investment trust (REIT) status?**
    Answer reference: Section 4.8.5

Chapter Two

Fundamental Analysis

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This syllabus area will provide approximately 6 of the 80 examination questions



1. Company Analysis

Learning Objective

2.1.1 Understand statutory accounting requirements and the constituents of a set of accounts

1.1 Annual Reports and Accounts

Globally, companies are generally required to prepare financial statements and disclose key information about the company within an annual report and accounts. The purpose of these statements is to provide users with relevant and reliable information that helps them to assess the company's financial health, performance and cash flows. They offer insights into the company's profitability, liquidity, solvency and overall financial position, thus enabling stakeholders to make informed decisions. The obligation to prepare these statements rests with the company directors, as part of their legal duty.

Typically, an accounting period spans 12 months although, in certain circumstances, the period may be less or longer than this, eg, the company is new or has been wound up.

The size of the company determines the extent of financial reporting requirements, with smaller companies enjoying more exemptions and fewer obligations with which to comply; in contrast, large companies must prepare full financial accounts with detailed disclosures. If a company qualifies as either a micro, small- or medium-sized company over two successive accounting periods, then it will automatically qualify as such in the following accounting period. Company size is based on criteria such as turnover (total income or sales), total assets (the value of everything the company owns) and average number of employees; however, these criteria can vary between countries.

In addition to the above requirements, public limited companies (plcs) with a stock market listing must also incorporate the following within their annual report and accounts:

- **A statement of changes in equity** – this shows the profits and losses made by equity holders during the accounting period. It includes any dividends paid to shareholders, which are reported separately from the statement of comprehensive income as an appropriation of profit.
- **An operating and financial review (OFR)** – this provides a narrative on the company's performance and prospects, consistent with the company's accounts.
- **Additional disclosures** – plcs are often required to disclose whether they have adhered to relevant corporate governance standards and regulations, including any governance codes of practices in their jurisdiction (eg, the UK Corporate Governance Code).

Many listed companies voluntarily provide additional information about their strategy, business performance and financial management. This is often presented in a chairman's statement, a chief executive's review and a finance director's report. In some countries, climate-related financial disclosures are now mandatory for certain types of companies; for others, they remain voluntary or are subject to less stringent reporting requirements.

Listed companies must also publish a half-yearly (or interim) set of reports and accounts. Apart from not being subject to a full independent audit, they do not contain as much information about the company's activities as the annual report and accounts.

1.1.1 Regulatory Framework for Financial Reporting

Financial reports and statements must adhere to established rules, regulations and guidelines regarding their format and content, in order to provide clear, consistent and comparable information to stakeholders including investors, regulators, creditors and other parties interested in the company's financial health. The specific requirements for financial reporting vary by country, but most jurisdictions follow internationally recognised standards or frameworks, such as the International Financial Reporting Standards (IFRS).

In this context, IAS 1 'Presentation of Financial Statements' sets out the overall framework for presenting financial statements, ensuring that they provide transparent and comparable information. Issued by the International Accounting Standards Board (IASB) – which is an independent, privately funded accounting standard-setter based in London – IAS 1 is part of a broader effort to develop high-quality, understandable and enforceable global accounting standards.

In the UK, for example, the legal framework for financial reporting is governed by the Companies Acts, under which directors are legally required to prepare financial statements. The format of these financial statements is defined by standards set by the Financial Reporting Council (FRC), which ensures that the reports reflect the company's activities during its most recent accounting period and its financial position at the end of that period.

In 2024, the IASB introduced a new standard, IFRS 18, applicable to all companies across all industries, which will be effective for annual reporting periods beginning on or after 1 January 2027 (although earlier application is permitted).

The new standard seeks to respond to demands from investors for more relevant information and transparency in the presentation of financial statements, as well as greater comparability between statements and consistency in how particular financial measures are communicated.

1.1.2 GAAP and IFRS

Generally Accepted Accounting Principles (GAAP) are a set of guidelines and rules that ensure uniformity and comparability in financial statements. They provide the basis for preparing financial statements.

Over time, however, countries have developed their own versions of GAAP, which makes international comparisons difficult and requires companies with operations in multiple countries to publish multiple sets of statements for different countries. To address this, most countries have adopted, or converged their GAAP with, International Financial Reporting Standards (IFRS) – a principles-based approach (so it focuses on good reporting and provides guidance on how specific objectives relate to given situations) that contrasts GAAP's rules-based approach.

The most notable exception is the US. While the US has not adopted IFRS, the Securities and Exchange Commission (SEC) allows foreign issuers to prepare financial statements in accordance with IFRS only. The UK replaced its GAAP with Financial Reporting Standards (FRS) in 2015 to align more with IFRS.

1.2 Constituents of a Set of Accounts

A company's reports and accounts typically include a statement of financial position (balance sheet), statement of comprehensive income (income statement), and statement of cash flows (cash flow statement).

1.2.1 Statement of Financial Position (Balance Sheet)

The statement of financial position provides a snapshot of a company's financial position, as at its accounting year end, by summarising the assets it owns and how these are financed. It is often described as a photograph of the company's financial position in that it does not tell the user anything about the company either immediately before or immediately after its date; rather, it reflects the company's position only at this one point in time. This statement must be prepared in a prescribed format as set out by relevant regulations (eg, the UK's Companies Acts).

The top half of the statement of financial position comprises the following elements:

- **Assets** – an asset is anything that is owned and controlled by the company and confers the right to future economic benefits. Assets are categorised into two types:
  - **Current assets** – assets purchased with the intention of resale or conversion into cash in the ordinary course of business, usually within a 12-month period.
  - **Non-current assets** – assets held for long-term use within a business. There are two types: fixed assets (held for sale); and long-lived assets (used by the business to generate revenue on a continuing business). Fixed assets are further divided into tangible (ie, they have physical substance – eg, property) or intangible (ie, without physical substance, but separately identifiable and capable of being transferred – eg, intellectual property rights).

- **Liabilities** – obligations that a company owes to external parties events. Liabilities are categorised based on when they are due: current liabilities are due within one year, and non-current liabilities are due after more than one year. Proposed dividends are not recognised as a liability until declared by a resolution approved by shareholders at a general meeting.

The bottom half of the statement typically reflects the company's equity or shareholders' funds, known as shareholders' equity, which represent the ownership interest in the company. This section shows the residual value of assets after all liabilities have been deducted, and includes various items that contribute to the company's net worth, for example, retained earnings (profits retained from operations that are available for distribution as dividends or reinvestment).

The construction of this statement is underpinned by the accounting equation:

$$\text{Assets} = \text{Liabilities} + \text{Equity}$$

This ensures that the statement of financial position 'balances' (hence why it is also called a balance sheet). Other versions of this equation are also available.

1.2.2 Statement of Comprehensive Income (Income Statement)

The statement of comprehensive income (also called the income statement) summarises the company's revenue transactions over the accounting period to produce a profit or loss. As a result, this statement is often referred to as the profit and loss account. However, being constructed on an accruals (rather than a cash) basis, profit must not be confused with the company's cash position. It is used by stakeholders to assess the company's profitability, financial performance and ability to generate future cash flows.

Like the statement of financial position, the format of the statement of comprehensive income is governed by regulatory frameworks (eg, the UK's Companies) and constructed based on accounting standards.

The statement of comprehensive income derives the company's net income (ie, the amount of money that the company earns after deducting all expenses, taxes and costs from its total revenue), which is then taken to the statement of changes in equity, and shown as retained earnings on the statement of financial position.

The two most important items in the statement of comprehensive income for stakeholders are:

- **Revenue** – the income generated in the reporting period by selling goods or providing services during the normal course of operations. Companies need to generate revenues to earn a profit and stay viable in the long run. As revenue features at the top of the statement, it is often referred to as the 'top line'.
- **Profit** – the amount of money earned after deducting all allowances business expenses. It is at the bottom of the statement of comprehensive income, hence is often referred to as the 'bottom line'. The amount of profit earned during the accounting period will impact the company's ability to pay dividends and finance the business's growth from internal resources. Further, to survive in the long run, businesses must be profitable, so measuring current and past (as well as future) profitability is very important.

1.2.3 Statement of Cash Flows (Cash Flow Statement)

The statement of cash flows (also called the cash flow statement) provides insight into how a company generates and spends cash over an accounting period. Unlike the statement of comprehensive income, not all items reported result in an immediate cash flow – eg, a cash flow occurs when an asset is purchased or sold, but not when it is depreciated; and cash flows occur when debts are settled, which may differ from when the revenue or expense is recognised.

Since cash is critical for a company's ongoing operations, it must be possible for stakeholders to track how financial resources are generated and used. This statement highlights liquidity and cash flow trends, thereby offering a clearer view of the company's financial health.

Cash flows are broken down into the following categories:

- **Operating activities** – cash flows from core business activities that are not related to investing or financing. This category includes cash received from customers, and payments to suppliers and employees.
- **Investing activities** – cash flows from the acquisition and disposal of long-term assets and other investments.
- **Financing activities** – cash flows that affect the company's equity and borrowing structure such as dividends paid, loan repayments and proceeds from issuing shares.
- **Cash and cash equivalents** – this reflects overall changes in cash and cash equivalents during the period. It includes cash in hand, demand deposits and short-term, liquid investments that are easily convertible to cash with minimal risk of value changes.

1.3 Valuing and Comparing Companies

Learning Objective

1.4.6 Analyse equity securities and equity funds using the following valuation measures: price-to earnings (P/E) ratio; earnings per share; dividend yield; dividend cover; gearing; net asset value and enterprise value; past performance; price-to-cash flow (P/CF) ratio; price-to-book (P/B) ratio

2.1.2 Understand how to value and compare companies using: accounting ratios; benchmarks; earnings before interest, taxes, depreciation and amortisation (EBITDA); return on capital employed (ROCE)

The financial statements of a company (as described in section 1.2 of this chapter, with all the associated notes) can contain a substantial amount of information. They can, however, be perplexing.

Financial analysts interpret the financial statements through the calculation of financial ratios. For investors, the primary purpose of this analysis is to obtain a deeper insight into the true nature of the returns received and the risks faced. The directors and managers of the company may wish to assess the efficiency and effectiveness of available assets, as well as the company's ability to generate profits. Further, lenders may wish to consider the breakdown and servicing of financing to ensure that the company can meet its debt obligations.

A wide range of standardised ratios are commonly analysed to assist these stakeholders, divided into the following categories:

Type of Ratio	Description
Profitability	Assesses the trading or operating performance of the company. Profits are needed to provide investors with the returns they require, and to provide funds for reinvestment in the business.
Liquidity	Evaluates the trading risk of the company. This is the risk that, as a result of trading activities, the company becomes unable to pay its suppliers and ceases to exist as a going concern.
Gearing	Assesses the ability of the business to meet its long-term debts, and the risks to those providing financing to the company from excessive borrowing or leverage.
Investment returns (also called investors' ratios)	Assess the returns to those providing financing to the company and the efficiency of the business in managing its assets.

We will now consider some of the key ratios that are most commonly used in financial analysis. Further, many of these ratios are compared against a company's peers or its own historical performance for benchmarking purposes. Due to the large number of ratios available, candidates who wish to explore this further are encouraged to refer to additional resources.

1.3.1 Profitability Ratios

Profitability ratios help to analyse the ability of the company to generate profits relative to its revenues, expenses, assets, and equity; in other words, they measure the effectiveness of the company at generating profits using its resources.

Profit Margins

Profit margins are some of the most common financial ratios, as they include the factors that influence profitability whether those factors are under management control or not. Compared with the industry averages, profit margins can tell investors how well a company's management and operations are performing against its competitors.

There are three main types of profit margin:

- **Gross profit margin** looks at the percentage of revenues that the company earns after considering just the costs of sales. Firms that have a relatively higher gross profit margin can spend a higher portion of income on other operating expenses, including research and development, marketing and financing costs.

Gross profit margin (%) = Gross profit / Revenue

- **Operating profit margin** describes the percentage of revenues that the company earns after considering costs of sales and other operating expenses (eg, distribution and administrative costs). The higher the operating margin the better, as this shows that the company can keep its costs under control; it can also mean that sales are increasing faster than costs.

Operating profit margin (%) = Operating profit / Revenue

As operating profit is the profit before considering finance costs (interest) and any tax payable, it can be described as profit before interest and tax (PBIT), or earnings before interest and tax (EBIT). That said, sometimes EBIT includes non-operating revenue, which is not a part of operating profit; for firms without non-operating revenue, operating profit will be equal to EBIT.

EBITDA (earnings before interest, tax, depreciation and amortisation) is an indicator of a company's financial performance which is calculated in the following manner:

EBITDA = Revenue – Expenses (excluding tax, interest, depreciation and amortisation)

EBITDA is essentially net income (profit) with interest, taxes, depreciation and amortisation added back to it, and can be used to analyse and compare profitability between companies and industries because it eliminates the effects of financing and accounting decisions.

- **Net profit margin** shows what percentage of revenues is actual profit, after all expenses are deducted. Thus, as all costs are included, the net profit margin measures how successful a company has been at making a profit on each sale.

Net profit margin (%) = Net profit / Revenue

Generally, higher ratios are better, as they indicate that a company is more effective at converting sales into profit. Lower margins are often explained by prices being too low, or costs too high. That said, a low profit margin does not always indicate a poorly performing company, and a high profit margin does not necessarily translate to high cash flows. Note also that profit margins can be negative (eg, if a company's overhead costs are too high).

Return on Equity (ROE)

Also called return on shareholders' funds (ROSF) and return on net worth (RONW), ROE is a useful measure of profitability as it shows how well a company can generate benefits for its equity shareholders beyond earnings; thus, they can clearly see if they are getting a sufficient return on their investment. At the same time, the company can evaluate how efficiently it is using the firm's equity.

ROE (%) = Net income / Shareholders' equity

where shareholders' equity is the amount of funds provided by shareholders, which come from two main sources: the share capital and share premium (being the funds paid by investors for new shares in the company), and retained earnings (ie, accumulated from profits not paid out as dividends over the years).

Hence, shareholders' equity can be calculated in two ways:

$$\text{Shareholders' equity} = \text{Total assets} - \text{Total liabilities}$$

$$\text{Shareholders' equity} = \text{Share capital} + \text{Retained earnings} + \text{Share premium}$$

An ability to earn consistently above average rates of return on equity is the most fundamental characteristic of a good company.

ROE must be compared to the company's own historical ROE, and to the industry's ROE average. The level of ROE that is considered strong will depend on the industry in which the company operates, at which stage in the company lifecycle the firm is in, and the economic situation. A good rule of thumb is to target an ROE that is equal to or just above the industry average – if higher, this could indicate that the company is more successful than generating profit internally. Note, however, that an industry's average ROE may be skewed by any outliers.

Return on Capital Employed (ROCE)

ROCE is a better comparison between companies than ROE, since ROE is heavily affected by differences in the capital structure of companies, some of which have a much higher degree of debt funding than others.

ROCE is a widely used ratio for measuring the overall profitability of a company in relation to the long-term capital employed into the business. It effectively gives the yield for the company's operations relative to its long-term capital employed, which includes all long-term funds on the statement of financial position; that is, shareholders' equity, as well as long-term debts and borrowings.

$$\text{ROCE (\%)} = \text{Operating profit} / \text{Capital employed}$$

Note that operating profit is a company's profit before interest and tax. Interest and tax are excluded from the calculation because we are trying to identify how much profit a company has generated from its assets, and different companies have different financial commitments and may be subject to different tax rates.

Capital employed is money which the company holds from shareholders and debt providers, and which it uses to generate profits.

The amount of capital employed can be calculated in two ways, as follows:

$$\text{Capital employed} = \text{Equity} + \text{Non-current liabilities}$$

$$\text{Capital employed} = \text{Total assets} - \text{Current liabilities}$$

Like ROE, evaluating ROCE requires a comparison with other businesses in the same sector, as well as a consideration of prevailing market conditions. It is especially useful when comparing companies in capital-intensive sectors (ie, those requiring large amounts of capital expenditure) since it analyses debt and other liabilities, as well as profitability, thus providing a much clearer understanding of financial performance.

1.3.2 Liquidity Ratios

Liquidity relates to a company's short-term operations and its ability to meet its ongoing cash requirements. Liquidity ratios then aim to determine the following:

- Does a company have the resources to meet its operating requirements from its working capital on a timely basis?
- Can a company realise those resources quickly enough to raise cash when required, to pay off its liabilities as they fall due?
- Liquidity is crucial to a company's fortunes. Even with an impressive order book and plenty of assets, companies sometimes fall into liquidation because they do not have enough cash to pay the bills. Liquidity ratios are therefore, watched very carefully by analysts and investors.

Current (Working Capital) Ratio

The purpose of the current ratio (also called the working capital ratio) is to determine if the current assets recoverable within one year are sufficient to cover the liabilities that fall due within one year.

As in accounting convention, 'current assets' normally refer to those assets which are recoverable within one year. However, some receivables may be recoverable after more than one year. This fact must be noted in the company's accounts, if material.

Current ratio (x) = Current assets / Current liabilities

As a general rule, a current ratio of between 1.5 and 2 is most commonly acceptable, although the actual number will depend on the type of business and economic conditions.

A ratio above 1 indicates that a company has sufficient short-term assets to cover its short-term debt, so it has a better ability to meet ongoing and unexpected bills, thus reducing any cash flow pressure. Stronger liquidity can also enable cash discounts to be negotiated with suppliers.

Any ratio below 1 indicates negative working capital. This may indicate that the business has a higher chance of falling into liquidity problems and, thus, may face difficulties in meeting its short-term commitments. Further, additional working capital support may be required. This can adversely impact terms of trade, with reduced credit facilities, in which case an overdraft facility could assist. Building a reserve of cash investments may alternatively create a working capital buffer.

At the other end of the scale, anything over two suggests that the company has too many current assets (cash, trade receivables and inventories) or is not investing excess assets in the most productive and yield-generating manner. The circumstances of every business vary, however, so any snap judgements about an appropriate current ratio are ill-advised.

Quick (Acid Test or Liquidity) Ratio

One limitation of the current ratio is that it includes inventory, which may not be easily convertible into cash in the short term, particularly during times of financial crisis. The quick ratio (also called the acid test ratio or liquidity ratio) adapts the current ratio to remove the problem of inventory. It is calculated as follows:

$$\text{Quick ratio} = \text{Current assets} - \text{Inventory} / \text{Current liabilities}$$

The quick ratio is therefore a more stringent test than the working capital ratio. It indicates whether a firm has enough short-term assets to cover its immediate liabilities without selling inventory.

The quick ratio should be 1:1 or better; however, this varies widely by industry. A company with a quick ratio of less than 1 is not necessarily insolvent and unable to pay off its liabilities. Depending on the type of business, it may be a sign of liquidity problems.

1.3.3 Gearing Ratios

Financial analysts are keen to examine gearing ratios for businesses as they consider the capital structure of a company and the relationship between its borrowings and shareholders' funds, which are not an immediate obligation of a company. The use of gearing (or financial leverage) is found in many businesses, in particular in the financial services sector. High levels of gearing can indicate much greater levels of financial risk.

A company that has raised a high proportion of its capital through borrowings (as opposed to by issuing shares) is described as being highly geared. Such a company is more vulnerable to business cycle downturns because a company will need to continue to service its debt commitments to its bondholders even when its earnings are depressed. Ideally, a company will not rely too heavily on such sources of funds. This is because of the following:

- A company reliant on borrowings may have problems if its lenders decide not to roll over the debt, and the company cannot easily pay it back.
- The company's business strategies may become distorted, because it has to focus more on the short-term need to generate cash (to make interest payments and repay the capital of the loan) than on longer-term planning.
- When times are challenging and profits are poor or non-existent, or if interest rates rise, the company may struggle to find the cash to keep up on its interest payments. It must still service these payments, though, and as a consequence, will suffer a disproportionately high downturn in profits.

When market conditions improve, highly geared companies may be expected to do better than those of their competitors with little or no borrowings. Their profits will increase, but they are still only committed to the same fixed levels of interest repayments (unless they have issued floating rate debt); thus, the surplus profits are available for shareholders.

The formula for calculating gearing is:

Gearing (%) = Long-term liabilities / Capital employed

Another version of the gearing ratio is the 'times interest earned' ratio. It is calculated as follows:

Gearing (%) = Earnings before interest and tax / Interest payable

Debt/Equity Ratio

The debt/equity ratio (also called debt-to-equity ratio) is a financial leverage ratio that measures how much a company is financing its operations with debt as compared to its shareholders' funds (ie, equity).

Debt/equity ratio (%) = Debts + Preference share capital / Shareholders' equity

If the debt/equity ratio is too high, this could signal that the company is financing a significant amount of its potential growth through borrowing, which subjects the company to potential risk. On the other hand, if it is too low, the company may be over-reliant on equity to finance the business, which can be costly and inefficient.

Net Debt/Equity Ratio

An alternative to the debt/equity ratio is the net debt/equity ratio (also called net debt-to-equity ratio). This ratio takes into account the assets that a business can use to offset its debt.

Net debt/equity ratio (%) = Debts + Preference share capital – Cash / Shareholders' equity

Interest Cover

Interest cover is a measure of the ability of the company to pay the interest on borrowings out of its operating profits and other income receivables for the year.

Interest cover (x) = Operating profit + Interest receivables + Other income receivables / Interest payables

In general terms, the higher the level of interest cover, the less risk there is to either shareholders or lenders. An appropriate cover ratio varies again across different business sectors, so there is no single optimal level.

1.3.4 Investors' Ratios

For investors, one paramount set of ratios relate to the earnings of a company. Investors seek good return (either as income or capital growth, or some combination), and they weigh these returns in relation to potential risks in holding the investment, including the possibility of a partial or complete loss of capital.

Dividend Yield

One common comparison is the **dividend yield**. This is the dividends paid by the company to the ordinary shareholders in respect of the preceding financial year, expressed as a percentage of the current market price of the share.

The dividend yield is often calculated on a gross basis (ie, before any tax has been deducted) so that investors can assess them based on whatever their own personal tax rate is. This is based on the cash dividend paid per share plus any associated tax credit (if applicable). The formula is as follows:The dividend yield of an ordinary share is calculated as follows:

Gross dividend yield (%) = Gross dividend per share / Current market price per share

The gross dividend yield is therefore a historical measurement (ie, it is based on past events which may not be repeated in the future). Sometimes, investors will calculate a prospective yield based on a forecast of what the dividends will be for the current financial year.

When a company declares quarterly or interim dividends, it is usual to continue reporting the dividend yield on the basis of the dividend for the previous year; the dividend is not updated to reflect the current year's part performance to date.

Long-term investors in equities are often influenced by the dividends paid by a company, as this is a vital part of the total return from holding equities. However, an ordinary shareholder has no guarantee of any dividend at all, nor is there a specific amount that can be relied upon from companies which have historically paid dividends. Even dividends from large and established companies can be reduced or eliminated.

Earnings Per Share (EPS)

Not all of a company's profits are distributed to its shareholders by way of dividend; rather, some of them are retained for reinvestment into the business. It is important that this happens if a company is to grow and remain competitive, and if its share price is to remain strong over the long term.

Investors who are not reliant on their dividend stream to live on may be more interested in a company's overall earnings, instead of just the element it distributes by way of dividend. For investors that are primarily interested in receiving a steady source of income, an important consideration is how much scope a company has for increasing its existing dividend.

In this regard, EPS is one of the most useful and popular ratios. It is used universally with more or less the same definition in most jurisdictions, but is one ratio with prescribed rules of calculation laid out by the IFRS (IAS 33). This essentially defines the EPS as:

EPS = Net profit (or loss) attributable to ordinary shareholders / Average weighted number of ordinary shares outstanding in the period

The EPS is expressed in monetary terms and reveals how much profit made during the year is available to be paid out to each shareholder – the higher the EPS, the better a company's profitability. A company's EPS should always be considered alongside that of other companies so that investors can make more informed and prudent investment decisions.

It is important to remember, however, that a company's future performance is by no means certain. Further, the EPS does not mean that the investor will receive this money as a dividend.

In addition to the above 'basic' EPS, diluted EPS accounts for the potential dilution of shares from securities such as stock options or convertible bonds. This offers a more conservative view (ie, a worst-case scenario) of a company's profitability and potential earnings per share if all dilutive securities were exercised.

Earnings Yield

Steady growth in a company's earnings should, in theory, ensure that the ordinary shareholders can continue to receive stable and rising dividends in future. Thus, the earnings yield calculation can be a good indicator of one company's comparative strength of earnings against that of another. The formula is as follows:

Earnings yield (%) = Earnings per share (gross) / Market price of share

Price/Earnings Ratio (P/E Ratio or PER)

The P/E ratio is used by analysts to determine whether a company's stock is fairly valued, overvalued (high P/E ratio) or undervalued (low P/E ratio). It is calculated as follows:

P/E Ratio = Current market price per share / Earnings per share

That said, a high P/E ratio could also indicate that investors expect a high level of earnings in future, and vice versa.

Investors may compare the P/E ratio of a company with its own historical P/E ratio to evaluate its performance over a certain period of time, and/or against its competitors within the same industry – it should not be viewed in isolation.

Some of the main reasons why the P/E ratio is a useful tool for investors in equities are as follows:

- **Relevance** – it may be more relevant to analyse a share's performance on the basis of its earnings than its dividend record.
- **Comparisons** – P/E ratios can be useful for comparing the shares in different companies, particularly those in similar industries.
- **Risk** – a company's P/E ratio can show how risky the market believes an investment in the company to be.
    - A company with a P/E ratio that is lower than the average for its sector or industry, or to the company's own historic norms, could indicate that it has the potential for an upward correction in its price, providing that the market expects its profits to improve in the future (ie, you could regard its shares as 'cheap'). Alternatively, it could indicate that the company is in difficulty and that prospects for its recovery are seen as uncertain (ie, you could regard its shares as cheap, but for a good reason); thus, it has a high perceived level of risk.
    - A high P/E ratio may indicate a relatively low perception of risk, or an expectation of good profits growth. Alternatively, it could mean that the share price is high relative to the company's earnings and the shares are possibly overvalued.

P/E ratios are not without their difficulties as predictors of a company's future share price performance. In part, this is because a company's earnings can fluctuate significantly from year to year, so reliance on historic figures can be risky. For this reason, P/E ratios can be calculated on a historic or projected basis, based on assumptions as to what the company's EPS will be in the future.

Following on from this, the price/earnings-to-growth (PEG) ratio helps investors to value a stock by comparing a company's share price with its earnings and future growth prospects. It is calculated as follows:

PEG ratio(x) = P/E ratio / EPS growth rate

Theoretically, a PEG ratio of one represents a perfect correlation between the market value of a company and its projected earnings growth. A PEG ratio that is higher than one can suggest that a stock is overvalued; while a PEG ratio below one indicates a stock is undervalued, which is more favourable.

Dividend Cover

The amount of dividend paid out (if at all) depends on a variety of factors, including the board of directors' outlook for the future success of the company. One guide to this can be the dividend cover, which indicates the stability and growth of dividends. It measures the earnings per share (EPS) as a multiple of the net dividend:

Dividend cover (x) = Earnings per share / Net dividend per share

Profits attributable to ordinary shareholders are the total of profits after tax and preference share dividends have been deducted.

You could think of dividend cover as being a way of showing the number of times that the dividend could theoretically be paid out to shareholders from available profits. Thus, shareholders' dividends are safer if there is a high level of dividend cover (there is plenty of money available to pay their dividends).

Generally speaking, a dividend cover of 2x or higher is considered prudent in that the company is perceived to be able to afford the dividend. An unusually high dividend cover implies that the company is retaining the majority of its earnings, presumably with the intention of reinvesting for further growth; this is common among companies which are still in a high growth phase, rather than more mature companies which are often expected to pay regular dividends.

If the ratio is less than 1x then the company is paying a dividend which is greater than the year's earnings. The company is funding part of its dividend using earnings retained from previous years (ie, past reserves) and is said to be paying an uncovered dividend. This is more likely to be a cause for investor concern.

Price-to-Cash Flow (P/CF) Ratio

This measure assesses the market's expectations or prospects about a company's financial health. It is similar to a P/E ratio except that this measure utilises the cash flow instead of earnings. Thus, the effects of depreciation and other non-cash items are removed. The ratio is calculated as follows:

P/CF ratio (x) = Current market price of share / Operating cash flow per share

In some cases, the free cash flow (FCF) is used instead of the operating cash flow. Analysts can use this method in the same way as the traditional P/E ratio to determine whether a firm is overvalued or undervalued. The calculated P/CF may be compared to similar companies or peers in a sector (ie, a comparables approach).

In a relative valuation exercise of this type, the firm's comparables act as a benchmark against which its P/CF is evaluated. A low P/CF ratio is attractive, as it may suggest on further investigation that the price of the firm is low when it is compared to its cash flow. This result may point to an undervaluation of the share. On the other hand, a high P/CF may suggest that a firm is not generating enough cash flow when compared to its peers.

Analysts will never place all their bets on just one metric, and will use other complementary techniques to investigate the intrinsic value of a share before reaching a final conclusion on its relative valuation.

Price-to-Book (P/B) Ratio

The price-to-book (P/B) ratio compares the market value of a company's stock to its book value, ie, the value remaining after all assets are liquidated and liabilities settled.

The ratio is predominately used when analysing the banking sector.

P/B ratio(x) = Current market price of share / Book value per share

Net Asset Value (NAV) Per Share

The NAV of a company is, in essence, everything it owns, less everything it owes. Thus:

NAV = Assets – Liabilities

We can calculate the NAV per share (NAV ps) of a company by calculating the total NAV of the company and dividing this by the number of shares in issue:

NAV per share = Assets – Liabilities / Number of shares in issue

The importance of the NAV per share of a company depends on the type of business it is in. For those companies whose resources are mainly made up of the people skills they possess (eg, architects' practices, advertising agencies or law firms), most of the value of the business may be tied up with the skills, knowledge and ideas they have. There is relatively little in the way of physical or financial assets. For other companies, however, with most of their resources committed to plant, property and equipment, such assets may be more valuable. In this case, an investor who buys a share at 100p may be interested to know that the NAV of the company is 130p; because if the company goes into liquidation, there is effectively a 30p buffer supporting that share price.

NAV is particularly important for investors in investment trusts, which is a type of investment company that invests in the shares of other companies – see chapter 5, section 3.1.1.

Enterprise Value (EV)

The EV of a business is a measure of what the market believes a company's ongoing operations are worth and is equivalent to the market capitalisation plus debt (including preferred share capital and any minority interest), less cash and any cash equivalents. It is not a measure of the company's value, but the value of its business and is considered a theoretical measure for the cost of takeover.

The EV is calculated as follows:

EV = Market capitalisation + Debt – Cash – Cash equivalents

1.3.5 Past Performance

In assessing whether to invest in a share or not, investors will invariably consider its past performance (despite repeated warnings that past performance may be no guide or guarantee for the future).

However, the past performance of a single share in isolation does not tell the whole story.

Investors should consider this in the light of the following factors:

- **The performance of the market as a whole** – this assessment can be done by looking at the performance of an appropriate benchmark (eg, the Nikkei 225 for a large Japanese company, or the DAX 40 for a German blue-chip company).
- **The share's total return** – that is, not only the capital growth (or loss) that has been obtained, but also the dividends that have been received. This is because a company's share price falls when it declares a dividend in favour of its shareholders, since it is paying away part of its value to those shareholders. When comparing one share with another, investors should be careful to consider the total returns of each: a share that pays out dividends may appear to have performed badly, on a purely capital basis, when compared with one that had a policy of paying no dividends.
- **The volatility of the share** – it is important to consider not only how well the share has done, but also the bumpiness of the ride that the investor has experienced in the process.

2. Economics

Learning Objective

2.2.1 Understand the fundamental economic concepts: supply and demand; costs (average, marginal and total); economies and diseconomies of scale; market structures; commonly used methods of assessing industries, companies and property investments; inequality of information; the function of the financial services industry in the economy

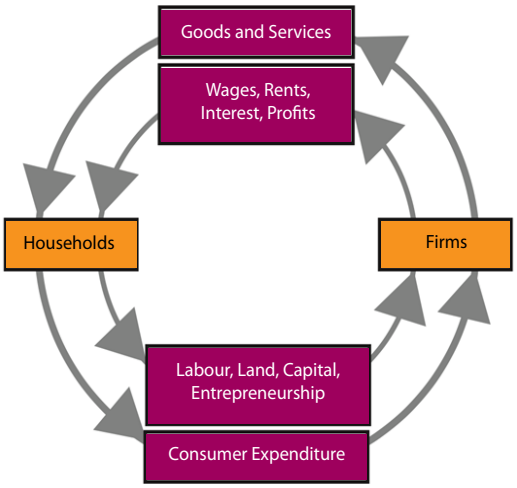
The broad subject of economics is considered by many to be a social science, in that it studies human behaviour in allocating scarce resources to meet endless demand for goods and services. It is arguably this human behavioural feature which distinguishes it from the natural or physical sciences, where observations legitimise a greater reliance on the identification and application of quantitative and numerical constants.

It is necessary to distinguish macroeconomics from microeconomics as the two major strands of this social science. Microeconomics studies how individuals and single firms allocate resources efficiently, while macroeconomics considers the aggregate behaviour of a wider population, as they each follow their individual microeconomic goals. It is this aggregation of the behaviour of a larger group (distinguished from other groups by its use of particular economic policies, legal systems or instruments, such as a currency) which allows common features (eg, growth, inflation, employment, productivity, government surpluses and deficits, and levels of imports and exports) to be assessed.

2.1 Supply and Demand

Within any economy, the provision of goods and services, the funds to pay for them, the provision of labour and the supply of wages all result from the interaction between households and firms.

The circular flow model below shows how firms supply goods and services to meet the demand of households in return for payment (the outer circle); and how households supply labour, land, capital and entrepreneurship to meet the demands of firms in return for wages, rents, interest or profits (the inner circle):



The total economic activity within a country's borders, called gross domestic product (GDP), can be measured through observing the money flow at any point in this diagram, in which there is no introduction or withdrawal of any factor. Flows of money, and thus of economic activity, are equal at any point.

In reality, though, modern national economies are far more complex, with numerous injections into and leakages out of an economy. Injections are additional sources of spending that can increase economic activity (eg, exports, government spending and investment), while leakages are withdrawals from the economy that can instead reduce it (eg, imports, taxation and savings).

2.2 Costs (Average, Marginal and Total)

An understanding of different types of costs helps businesses to make informed decisions about pricing and profitability, as well as to assess their financial performance at various stages of production, thereby maximising efficiency.

The three primary cost concepts are average cost, marginal cost and total cost.

Total cost (TC) refers to the sum of all costs incurred in producing a given level of output. It includes both fixed costs (ie, costs that do not change with the level of production, such as rent or salaries) and variable costs (ie, costs that vary with the level of output, such as raw materials and labour). Total cost provides insights into the overall financial expenditure involved in production.

Average cost (AC) is the cost per unit of output. It is calculated by dividing total cost by the number of units produced. Average cost indicates how efficiently a company is producing goods, and can be used to set pricing strategies. If average costs decrease with increased production, then a company can benefit from economies of scale.

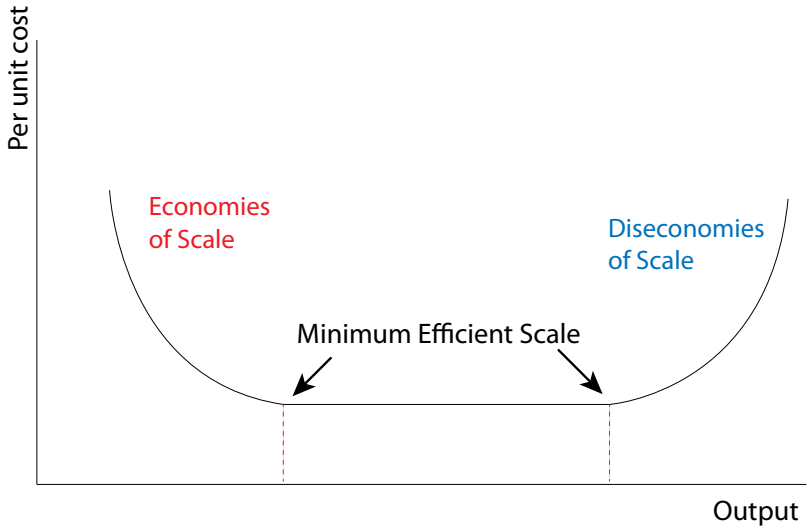
Marginal cost (MC) refers to the additional cost of producing one more unit of output. It helps businesses to understand the impact of increasing production on total cost. Marginal cost is particularly useful in decision-making because it shows whether producing additional units is profitable.

2.3 Economies and Diseconomies of Scale

Firms maximise profit by producing at a level of output where their marginal costs (MC) are equal to their marginal revenue (MR). That is, a firm will manufacture one additional unit of a product or service when the extra revenue generated by the sale of that unit equals the cost of producing it.

In the long run, the production process benefits from economies of scale as the firm's productive capacity increases; in other words, firms can benefit from cost advantages when increasing production, thus lowering the costs, in turn making production more efficient. Production costs are minimised at a point known as the minimum efficient scale (MES). Beyond this point, diseconomies of scale set in.

This might be caused by business expansion resulting in a lack of space for employees to operate at full capacity or communication becoming less effective, for example.



2.4 Market Structures

There are three types of market structure: perfect competition, monopoly and oligopoly.

2.4.1 Perfect Competition

Perfect competition is a theoretical representation of how a free market would operate where no one buyer or seller is able to influence the price of a single homogeneous product. A perfectly competitive firm is one that operates within an industry containing an infinite number of firms, each of which accepts the market price for a homogeneous product set by the interaction of consumer demand for the industry's total supply. In the long run, perfectly competitive firms only generate 'normal profits' (ie, the firm makes sufficient revenue to cover its total costs and remain competitive in an industry).

The characteristics of a perfectly competitive industry are as follows:

- No one firm dominates the industry, which contains an infinite number of firms.
- Firms do not face any barriers to entry or exit from the industry.
- A single homogeneous product is produced by all firms in the industry.
- There is a single market price at which all output produced by any one firm can be sold.
- There is an infinite number of consumers who all face the same market price.
- Perfect information about the product, its price and each firm's output is freely available to all.

If one firm was earning 'supernormal profits' then other firms would enter the market, supply the goods, and thereby drive down the availability of profits until the supply matched the demand and supernormal profits were eroded.

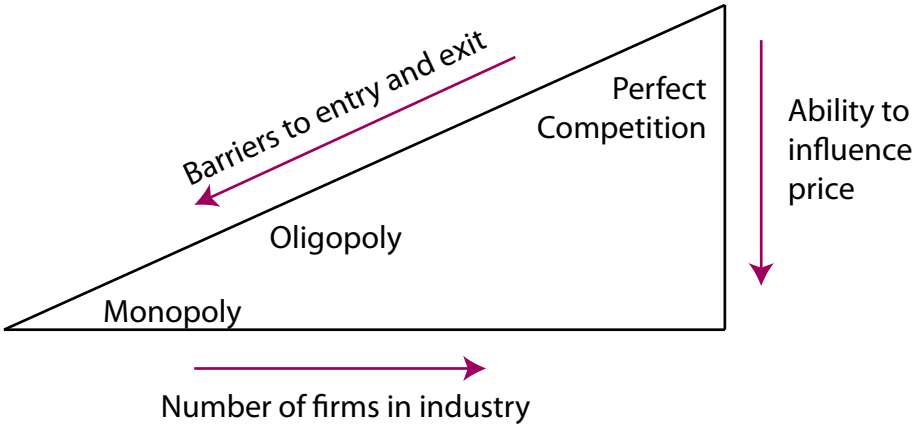
2.4.2 Monopoly and Oligopoly

Companies operating in a market or industry can gain market power, allowing them to take advantage and create inefficiency due to imperfect competition. For example, companies may artificially fix prices higher and moderate output.

A monopoly is a market structure with only one producer or supplier, and entry into the industry is restricted due to high barriers to entry. An oligopoly exists where a limited number of highly interdependent firms dominate an industry, typically through implicit or explicit collusion on price and output. Firms operating in a monopoly or oligopoly have some influence on their own output and pricing decisions, so can generate profits between normal and supernormal levels.

Most governments and financial regulators do not like to see one or a few companies having all the market share in one sector of the economy, mainly because it puts consumers at a disadvantage that might mean they do not get the best service or value for money. Governments want to see suppliers compete to ensure consumers are getting the best goods at the best price, and because competition drives innovation.

The diagram below provides a simplified representation of these different market structures:



Industrial Structure

2.5 Commonly Used Methods of Assessing Industries, Companies and Property Investments

When evaluating industries, companies and property investments, investors, analysts and decision-makers have various tools at their fingertips to assess performance potential and risks.

For companies and industries, one of the most common methods is the use of financial ratios, as covered in section 1.3 above (eg, P/E ratio, ROE and debt-to-equity ratio). Comparing these ratios against industry standards or competitors can provide valuable benchmarks for evaluating a company's performance versus others in the same sector, and thus a clear view of how well an investment or business is performing in its specific market and relative to broader economic trends.

For property investments, a similar approach is applied. Metrics such as the rental yield and cap rate are used to assess the potential returns (see chapter 1, sections 4.2.1 and 4.7.3). Location analysis, market demand for properties, and macroeconomic factors such as interest rates and inflation also play a role in determining the value and profitability of such an investment. Examination of trends in property prices and rental income over time can help investors to make informed decisions.

Other important considerations when assessing both companies and property investments are industry-specific factors (eg, market saturation, competitive intensity and regulatory environment). This helps stakeholders to understand the external forces that could impact the profitability and sustainability of an investment.

2.6 Inequality of Information

Also known as asymmetry of information or asymmetric information, inequality of information can be broadly summarised as the different degrees of knowledge and information available to the parties of a transaction resulting from how much access each party has to the true nature of the product's merits and demerits.

An example is the relationship between a borrower and a lender – the borrower knows their financial situation better, while the lender may struggle to assess the risk of default. Although the lender may check the borrower's credit history or salary, this only provides limited information. As a result, the lender often charges a higher interest rate (risk premium) to account for the uncertainty, which they would not need to do with perfect information.

Thus, information gaps:

- can lead to adverse selection, in turn affecting the quality of goods and services available on the market
- disturb the process of allocating resources efficiently, and
- mean that the correct prices cannot be set, according to the law of supply and demand.

It follows that inequality of information can cause market failure, leading to inefficiencies such as market distortions, misallocation of resources or exploitation of consumers. See section 4.3 of this chapter.

2.7 The Function of the Financial Services Industry in the Economy

The financial services industry supports the broader economy by enabling the efficient allocation of capital, managing risk and facilitating economic growth. It acts as an intermediary between savers and borrowers, ensuring that funds are directed toward productive uses such as business expansion, infrastructure development and consumer spending. By doing so, it helps to drive investment, innovation and job creation which, in turn, contributes to higher levels of productivity, income and overall economic stability.

Key functions of the industry include:

- banking, which provides essential services such as deposits, loans, and payments
- insurance, which spreads risk and protects against financial losses
- financial advice and planning, which offers guidance on investments, retirement planning, tax strategies and estate planning to help individuals and businesses make informed financial decisions and achieve their long-term financial goals
- asset and wealth management, which involves managing investments on behalf of individuals, institutions and pension funds to preserve and grow wealth, and
- investment services, which facilitate the buying and selling of financial assets such as equities, bonds and funds; this helps to allocate capital efficiently and support business financing.

The financial services industry also plays a role in stabilising the economy through regulatory frameworks and monetary policy channels, supporting confidence and mitigating systemic risk. It improves the flow of information through analysis and advisory services, thus helping to reduce information asymmetries that could otherwise distort markets.

Overall, a well-functioning financial services sector provides a strong foundation for economic resilience and long-term prosperity.

3. Macro-Economic Trends and Indicators

Learning Objective

2.3.1 Understand the main long-term global trends and the effects of technological changes/ advancements: ageing population; rising living standards; access to education; growth of the service sector; changing patterns of the economy; productivity of capital and labour; wealth and income distribution; growth of developing economies; natural resources; global health issues; social media, cyber security, e-commerce and artificial intelligence; climate change

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Along with other exogenous factors (political, social, technological, environmental, and legal and regulatory), the macro-economic dimension has a strong influence on all of the key capital markets and the asset classes that we study, namely: money markets, fixed income (bonds), equities, property and alternative investments.

Economic and demographic data differ markedly across countries and over time. Thus, we will consider a variety of features relating to the UK population – predominantly, social, demographic and economic factors. These are interrelated, and the reason that we begin with them is to help us understand people's investment needs, which result from the socioeconomic environment in which they live, and the trends that they may be subject to. Candidates who wish to learn more about economic and demographic data for other countries are invited to conduct their own research.

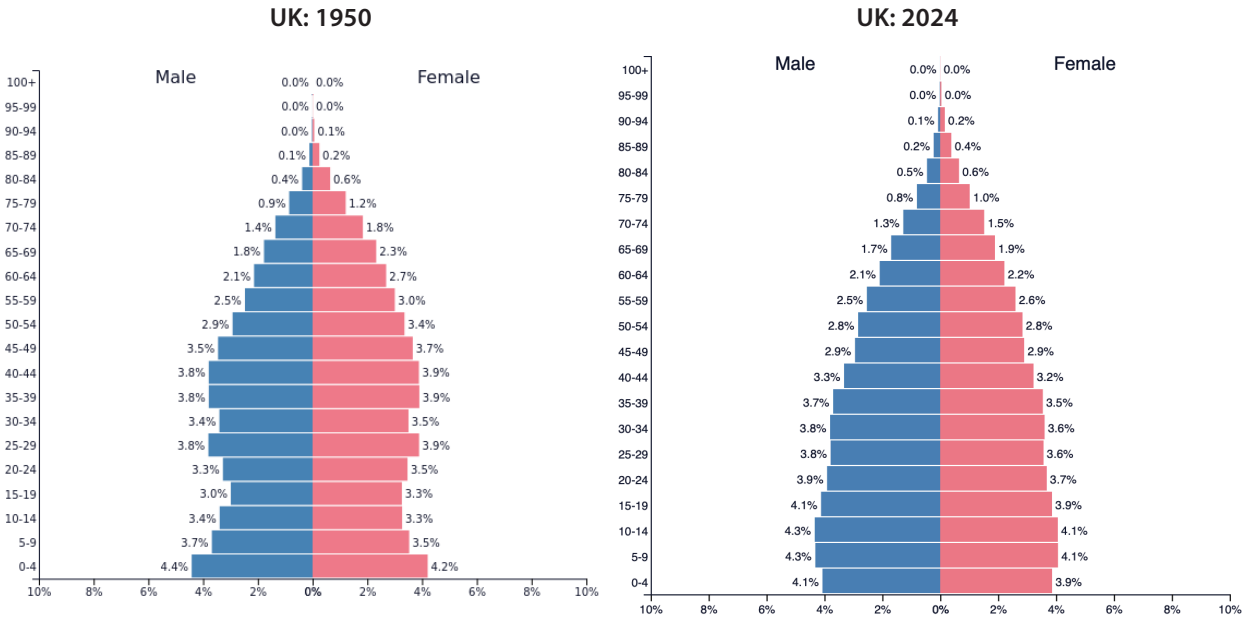
The term 'demography' means the study of populations using statistics, based on numbers collected through census returns and other surveys by the Office for National Statistics (ONS). In the UK, a full census of the population is carried out every ten years – the latest census of which took place in 2021, the results from which were released in 2022[1]. The UK government originally conducted its census as a simple headcount of the population; however, more recently, additional information about the population has been obtained.

3.1 Population Growth and the Ageing Population

According to the ONS's latest national population projection[2], from mid-2022 to mid-2032, the UK population is projected to increase by 4.9 million to 72.6 million. If past trends continue, it is estimated that the UK population should reach 76.6 million by mid-2047.

The population pyramid below compares the age structure of the UK population in 1950 with the population in 2024.

Age Structure of the UK Population – 1950 (left) and 2024 (right)



Source: Population Pyramid[3]

1 Office for National Statistics, January 2024. National population projections: 2021-based interim. Retrieved from https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/nationalpopulationprojections/2021basedinterim(Accessed: February 2024)

2 Office for National Statistics, January 2025. National population projects: 2022-based. Retrieved from https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/nationalpopulationprojections/2022based (Accessed: February 2025)

3 Population Pyramid, 2024. Population Pyramids of the World from 1950 to 2100. Retrieved from https://www.populationpyramid.net (Accessed: February 2025)

As we can see from these population pyramids, the UK (in common with Europe and other parts of the G7 economies) has an ageing population, with an increasing number of people aged over the state pension age (SPA) – ie, the age at which people become eligible for the state pension, a regular payment provided by the government, which is currently set at 66.

As more of the population enters retirement, this increases the dependency ratio. With more people claiming benefits (such as the state pension and other age-related benefits, if their health deteriorates in old age), the working population faces a great strain to generate wealth, as fewer workers will be paying income taxes to support the increased burden on the state.

In this scenario, taxes on workers will likely need to be raised, which may discourage work and reduce investment by firms, potentially having a negative impact. The government will likely encourage the private sector to share the burden of responsibilities in terms of pensions provision, healthcare, and education and training for younger people.

In response to this demographic challenge, the UK government has increased participation in pensions savings (eg, through the Pensions Act 2008, which requires employers to automatically enrol eligible workers into workplace pension schemes) and has raised the SPA (to 67 by 2028, and to 68 between 2044 and 2046, if not sooner).

While the UK working population as a percentage of the total population has remained fairly constant over the years, there has been a shift in the proportion of elderly to young, a trend that has been ongoing since 1961. This long-term shift is important for the following reasons:

- Elderly dependents have different needs (such as long-term healthcare) from younger people, whose main requirement from the state is education.
- The elderly, as a market segment, are becoming increasingly dominant, and retirement planning is a key concern for this group.
- The falling number of young people will mean that organisations may need to change their recruitment policies or production methods. With fewer people of working age, employers will have to compete for talent.

3.1.1 Access to Education

A key factor in shaping the future of a nation's workforce is education; and in the context of an ageing population, its importance becomes even more pronounced. The needs of the younger population, particularly in terms of education, must be met to ensure a skilled and capable workforce for future generations.

Given the demographic shift as covered in section 3.1 above, more emphasis needs to be placed on supporting the education and training of young people. Access to quality education and ongoing skills development programmes ensure that younger generations are equipped to contribute to the economy as the dependency ratio increases.

Further, there may be a greater need for policies that enhance lifelong learning and retraining opportunities to help workers adapt to changing job markets. Two examples are technology/artificial intelligence (AI) and climate change, which are covered in sections 3.6 and 3.10 respectively.

For example, workers in industries such as manufacturing and customer service may need to acquire computer programming or data analysis skills to work alongside AI systems and automation technologies. Similarly, employees in traditional sectors such as the oil and gas industry may need retraining in clean technologies such as solar energy, wind power and energy efficiency practices to align with the growing demand for renewable energy solutions.

3.2 Living Standards

The standard of living refers to the overall quality of life and wealth available to individuals or groups within a specific socioeconomic class and geographic area. The measure includes factors such as income, quality and availability of employment, class disparity, poverty rate, quality and affordability of housing, hours of work required to purchase necessities, and GDP, among many others. As living standards are linked to quality of life (which is subjective), economists struggle to find a single, reliable measure. A comprehensive index would need to capture all of these factors to be comparable across all regions of the world.

One common benchmark for measuring living standards is real national income per capita, calculated by dividing the real inflation-adjusted national income (GDP or GNP) by the total population. For cross-country comparisons, the data is typically expressed in US dollars. However, comparing living standards between countries is challenging. Economists have developed various indices over the years, including the poverty rate, healthcare access, income inequality and educational standards to get a more accurate picture. Actual individual consumption (AIC) is often used as a measure of standard of living as it incorporates all goods and services that a household consumes, regardless of whether they pay for them.

Regarding the UK, living standards have generally been on an upward trend for decades, although they have declined in recent years due to high inflation and the cost-of-living crisis. When measured using AIC, the latest data shows that UK's standard of living is equivalent to the 11th highest position in EU[4]. Luxembourg holds the top position, while Bosnia and Herzegovina ranks the lowest. Using GDP per capita, the UK is in 15th position in Europe[5]. The disparity between the AIC and the GDP per capita measures is due to public services (eg, health and education) being largely government funded in the UK. Luxembourg's relatively small population could also be distorting the data upwards.

Another study of UK living standards is published by the Institute of Fiscal Studies (IFS), based on median household income. In its 2024 report[6] covering 2022–23, the IFS noted that median household income before housing costs fell by 0.5%, making it 1.6% lower than in 2019–20. During the pandemic and cost-of-living crisis, incomes stagnated for poorer households, while middle- and high-income households saw small reductions. This decline was primarily driven by reduced employment income. Government support (eg, cost-of-living payments and energy rebates) helped to prevent larger falls for poorer households in 2022–23, but this support was temporary and has since ended, so may lead to further income reductions for poorer households.

4 Office for National Statistics, December 2021. Actual individual consumption per head in the UK: 2020. Retrieved from https://www.ons.gov.uk/economy/inflationandpriceindices/articles/actualindividualconsumptionperheadintheuk/2020 (Accessed: February 2025)

5 Trading Economics, 2025. GDP per capita PPP: Europe. Retrieved from https://tradingeconomics.com/country-list/gdp-per-capita-ppp?continent=europe (Accessed: February 2025)

6 Institute for Fiscal Studies, 2024. Living standards, poverty and inequality in the UK: 2024. Retrieved from https://ifs.org.uk/sites/default/files/2024-07/Living-standards-poverty-and-inequality-in-the-UK-2024-IFS-Report-R329.pdf (Accessed: February 2025)

3.3 Changing Patterns of the Economy

A distinction can be made between sectors of the economy which, as we will see, can change in importance over time:

- The **primary sector** of the economy consists of industries that produce raw materials from the natural environment such as mining, farming, and fishing, sometimes called extractive industries.
- The **secondary sector** consists of industries that process raw materials – largely, the manufacturing industry such as car manufacturers. This sector normally grows rapidly during the early stages of economic development.
- The **tertiary sector** is made up mainly of goods distribution and service industries, such as financial services, retail, and leisure and hospitality. It is often referred to as the service sector of the economy.
- The **quaternary sector** comprises industries providing education, training, the development of technology, and research and development (R&D), so it is sometimes referred to as the intellectual aspect of the economy. Without this sector, economic development would be slow or non-existent. Sometimes, this quaternary sector is included in the tertiary sector, as they are both service sectors.
- The **quinary sector** is the part of the economy that makes top-level decisions, including the government and top decision-makers in industries such as commerce and education sector.

In an economy, other distinctions can be made between:

- The **public sector** is run by governments (eg, doctors, police, teachers, civil servants), while the **private sector** is run by individuals and companies (eg, retail, manufacturing, local services).
- The **traditional economy** comprises bricks and mortar shops (eg, the high street, banks and cash points, and school textbooks) while the **digital economy** is based on technology (eg, internet websites, e-banking, and e-books). In practice, there is a degree of overlap between the traditional and digital sectors – eg, some traditional shops have embraced aspects of the digital economy, such as online sales.

3.3.1 The Growth of the UK's Service Sector

Since the 1970s, one of the most striking economic trends in the UK has been the sharp decline of the primary and secondary sectors, particularly manufacturing. This deindustrialisation has led to significant job losses and severe unemployment in regions that were once heavily reliant on specific industries.

In turn, activity has been replaced by a growing services sector which represents about 80% of the UK's GDP[7]. A major reason for the longer-term growth in this sector has been the rapid expansion in the banking, finance and insurance sectors, many of which are well placed to capitalise on technological advances. It is important to recognise that the UK is not the only economy to see a switch from manufacturing activity to services in recent decades; this is typical of the structural changes faced by many other G7 economies.

7 House of Commons Library, February 2025. Service industries: Economic indicators. Retrieved from https://commonslibrary.parliament.uk/research-briefings/sn02786/ (Accessed: February 2025)

As the economy has moved towards knowledge-based activity and shifted to the production of high-tech and high value-added services, the importance of skills, high-level training and innovation has increased. The productivity improvements and expansion in the UK services industry has not arisen just through local or domestic demand, but also through a focus on tradeable, knowledge-intensive services with which the other developing low-wage economies with less skilled labour are less able to compete.

3.4 Productivity

Economists identify four factors of production in the economy: land, labour, capital (ie, machinery and plant) and enterprise. These factors are combined in various ways to produce goods and services.

Productivity is a measure of the efficiency with which factors of production are used. It can be calculated as the total output divided by the number of units of a factor of production – for example, the number of persons employed (to measure the productivity of labour) or the number or value of machines used (to measure the productivity of capital).

Substitution between factors of production (for example, between labour and capital) may take place if it is feasible; for example, machines can be made to do work previously carried out by labour, or people can provide labour to do work that would otherwise be done by machines. It is most likely when the price or productivity of one factor of production rises relative to another.

Increases in productivity create greater economic wealth and boost real household incomes. By producing more with the country's factors of production, more goods and services become available for people to use and consume.

Generally, the services sector is more profitable than the manufacturing sector; this reflects the fact that the latter is more capital intensive, so involves more capital expenditure on fixed assets.

As productivity is a key determinant of long-term growth together with employment growth, it helps UK residents to enjoy high levels of prosperity. However, the UK has more to do to catch up with their comparators in Europe; uncertainties surrounding Brexit have been a key challenge resulting in firms holding back spending in areas (such as R&D and training) as well as lower levels of multinational investment and skilled foreign workers. The COVID-19 pandemic also had an impact, as certain industries put workers on furlough or made them redundant.

Overall, the recent decline in productivity has raised concerns about the longer-term impact on the economy, future growth and wage prospects, although this will only be determined by the ongoing success (or otherwise) of the UK's trading relationships post-Brexit.

3.5 Wealth and Income Distribution

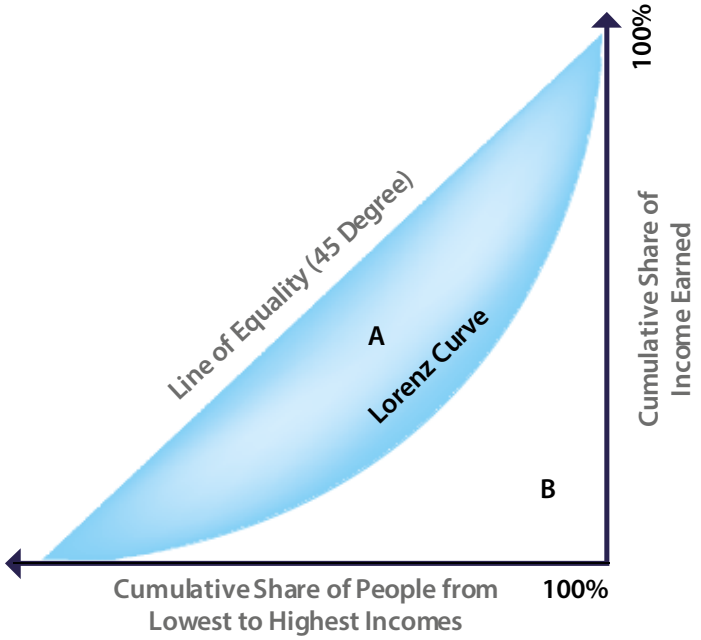
Economists make a clear distinction between income and wealth:

- **Income** is the amount received by individuals and households from all sources, including wages and salaries, state benefits, tax credits, pensions and investments (ie, rent from ownership of land and interest and dividends from savings and ownership of shares).
- **Wealth** is a stock of financial and real assets. Personal wealth is the value of individual and household assets, including property, financial, physical and pension assets.

Within an economy, income and wealth are not evenly distributed throughout households. For example, in the UK, the average annual income (before taxes and benefits) for the top fifth of households was 11.6 times greater than for the bottom fifth (£114,300 compared with £9,800)[8]. However, after all taxes and benefits, the gap reduced to 3.4 times (£82,200 versus £24,500 respectively). Broadly speaking, benefits such as universal credit and child benefit play a big part in reducing income inequality, as they are paid mainly to households with lower incomes.

The distribution of income and wealth can be measured by using concepts such as the Lorenz curve and the Gini coefficient.

- The Lorenz curve plots the cumulative percentage of income against the cumulative percentage of households, ordered from poorest to richest. A straight-line relationship represents perfect equality in an economy, where everyone has the same income. However, in all real economies, there is inequality, and the resulting Lorenz curve is typically concave to reflect this.



8 Office for National Statistics, December 2024. Effects of taxes and benefits on UK household income: financial year ending 2023. https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/bulletins/theeffectsoftaxesandbenefitsonhouseholdincome/financialyearending2023 (Accessed: February 2025)

- The Gini coefficient ranges between 0% (or 0, ie, perfect equality) and 100% (or 1, ie, perfect inequality) and is calculated by taking the ratio of two areas:

$$\text{Gini coefficient} = \frac{\text{Area A}}{\text{Area}\left(\text{A}+\text{B}\right)}$$

  Area A represents the region between the line of equality and the Lorenz curve. If this region was zero in terms of area, then A = 0 and the Gini coefficient = 0%. It means the Lorenz curve is actually the line of equality (ie, there is perfect distribution of income and everyone earns the same amount).

  If Area A occupies a very large area (making Area B very small), then the Gini coefficient is large (almost 100%) and it means there is uneven distribution of income. Countries with a high Gini coefficient are more likely to become unsettled by dissenting masses of poor people who are envious of the wealth and greed of a few rich people.

The UK has a very high level of income inequality compared with other developed countries, with a Gini coefficient of 33.1%[9].

3.5.1 Explanations for the Scale of Income and Wealth Inequality

The divide in incomes and wealth stems from a range of factors – primarily economic, but also social in nature.

a. **Changes in employment** – access to well-paid employment is a major factor. Economic crises (eg, the global financial crisis and the pandemic) increased unemployment around the world, widening inequality. More people today work part-time, are self-employed or work on zero-hours/short-term contracts where pay is lower and job protections are minimal. Additionally, stagnant wages and wage freezes (especially in the public sector) have reduced living standards.
b. **Decline of trade unions** – as trade unions have weakened, workers' bargaining power has diminished, contributing to greater inequality.
c. **Eroding value of the minimum wage** – while raising the minimum wage can reduce poverty, it may also increase unemployment among lower-wage workers as employers cut jobs or hours to offset higher labour costs.
d. **Government policy** – austerity measures resulting from rising government debt often reduce benefits for lower-income households, exacerbating inequality.
e. **Taxation** – progressive taxation reduces inequality by taxing wealthier households at higher rates, while regressive taxes (eg, value-added tax (VAT)) tend to increase inequality.
f. **Technological change** – technology increases demand for skilled workers, who can then command higher wages.
g. **Globalisation** – the outsourcing of low-skilled jobs to poorer countries has widened income gaps between nations. See section 4.2 for further details.

9 Statista, December 2024. Gini coefficient of the United Kingdom from 1977 to 2023. Retrieved from https://www.statista.com/statistics/872472/gini-index-of-the-united-kingdom/ (Accessed: February 2025)

3.6 Social Media, Cyber Security, E-commerce and Artificial Intelligence

3.6.1 Social Media

Another area that is having a major impact on the financial markets is social media as a platform to communicate beyond local and social boundaries. With technology rapidly evolving, all parts of society have had to adapt and take advantage of these new forms of communication. Governments use social media to communicate policy to the public, journalists and analysts to share their opinion of financial markets, and financial services firms to advertise products and services to consumers. With social media's increasing influence on global financial markets, regulators and international bodies are taking steps to oversee and regulate financial promotions and ensure consumer protection on these platforms.

3.6.2 Cyber Security

With the advancement of technology comes the evolution of cyberattacks which have become more frequent, widespread and sophisticated over time. Financial institutions, in particular, face growing threats from cyberattacks (known as cyber risk) due to the amount of money that scammers can make, if successful. Thus, regulators around the world are requiring firms to put in place appropriate measures so that systems are not left open to hacking and fraud, in turn putting consumer data and privacy at risk – eg, in the UK, under the Senior Management Arrangement, Systems and Controls (SYSC) sourcebook of the FCA Handbook.

3.6.3 E-commerce

As discussed in chapter 1, section 4.15, the growing trend in retail e-commerce sales worldwide has been accelerated by the COVID-19 pandemic. Consumer behaviours have been permanently altered, which has resulted in a surge in demand for warehouse space for storing goods, and logistics services to handle packaging and order dispatching.

3.6.4 Artificial Intelligence (AI)

Within the financial services sector, artificial intelligence (AI) – which involves machines that learn from data, solve problems, and adapt over time to improve their own performance – is playing an increasingly central role, transforming traditional financial institutions, and driving new innovations and operating models.

AI is revolutionising the banking industry with applications such as chatbots, customer relationship management, credit risk management, and fraud detection systems. These technologies enhance product and service quality, optimise data management, improve customer experience, and streamline traditional processes, thus making them more efficient. By using AI to create personalised, innovative offerings based on individual preferences and behaviours, businesses can improve customer satisfaction and stay competitive in a rapidly evolving market. All in all, these advancements are making it easier for a broader range of individuals to participate in the market.

Notably, AI adoption in finance has increased to more than half of financial organisations using AI, with 58% of finance functions employing the technology in 2024 (up from 37% in 2023)[10].

At the same time, though, firms that incorporate AI into their systems must be aware of the associated risks. For example, AI algorithms may inadvertently become biased, leading to discriminatory outcomes or reinforcing existing inequalities. If not carefully monitored and adjusted, biased AI can result in unfair treatment of certain individuals or groups, which goes against principles of fairness and equality – eg, the FCA's Fair Treatment of Customers (FTOC), as covered in section 1.6 of chapter 7. Therefore, businesses must implement robust ethical guidelines, continuous monitoring and regular audits to mitigate the potential biases embedded in AI systems and ensure fair and equitable outcomes for all users.

Data Monetisation

With the large quantities of valuable data generated today by financial services firms, and with the evolution of technology, data monetisation (ie, the additional revenue they can generate from customers' data) is becoming an emerging discussion topic. There are two key strategies: internally, to improve a firm's business operations and productivity, and externally, by using data to tailor their offerings to customers. Data monetisation does, however, come with legal and ethical risks (eg, customers expect their data to be kept safely and not sold on to other businesses).

3.7 The Growth of Developing Economies

Exact definitions of emerging economies and their markets are difficult to find, so the number of emerging markets (EM) that exist varies between different organisations. For example, the MSCI includes 20-30 countries in its EM Index[11], while the IMF recognises a broader range, with almost 100 countries falling under its 'emerging market' category[12].

The term EM was first coined in the 1980s by the economist Antoine Van Agtamael, then at the World Bank. He identified a set of economies that were large and undergoing a period of transformation marked by rapid economic growth and industrialisation. All EM economies are in transition, meaning they are moving from closed economy to open economies. Another feature of large EMs is that their countries often have large populations and/or occupy vast land masses, thus offering significant potential for economic and future development. This makes them attractive trade partners, particularly for G7 nations, which can benefit from exports or investment in EM, thereby expanding their own market opportunities.

EM growth is therefore fuelled in two different directions through:

- external growth, where strong trade links are established with G7 economies, and
- internal growth that supports domestic demand for their own goods and services.

10 GPTZero, March 2025. AI Adoption Rate by Industry. Retrieved from https://gptzero.me/news/ai-adoption-by-industry/ (Accessed: June 2025)

11 MSCI, January 2025. MSCI Emerging Markets Index (USD), Index Factsheet. Retrieved from https://www.msci.com/documents/10199/c0db0a48-01f2-4ba9-ad01-226fd5678111 (Accessed: February 2025)

12 International Monetary Fund, October 2024. Fiscal Monitor. Retrieved from https://www.imf.org/external/datamapper/datasets/FM (Accessed: February 2025)

It is this dual nature of growth that provides EM economies opportunities for accelerating their growth when compared to the developed G7 economies.

Additionally, many large EMs back their economic prowess with rising political influence. These economies are often focused on large-scale infrastructure projects, and they have implemented economic policies that foster rapid growth and expanding trade. Many also have aspirations to become global leaders in technology.

In recent years, EMs have been a significant beneficiary of globalisation (in terms of aggregate growth, poverty reduction and mobility and opportunities for low-income people) as large multinational companies push into new markets or outsource their manufacturing. However, as developed markets adopt more protectionist policies (which is covered in more detail in section 4.5 of this chapter), this could derail the growth in EM economies.

3.8 Natural Resources

The continued globalisation of economies has led to a more distributed world, where consumption is becoming more widely spread than before. Consumers are gaining greater mobility and middle-class society continues to expand. This continued growth and distribution has led to a significant increase in demand for natural resources (both hard and soft commodities) – eg, metals and crops. As a result, there is increasing pressure on economies to identify and secure access to these resources in order to remain competitive in the global market.

Continued advances in technology are helping to locate, extract (or preserve), and ultimately exploit resources. Costs are also a key factor, and even though these resources may be identified, the cost of extraction combined with environmental factors may be prohibitive. This can lead to a requirement to 'buy in' the resources, potentially at a premium from a competitive economy.

3.9 Global Health Issues

The COVID-19 pandemic had far-reaching effects around the globe. Lockdowns and uncertainties led to significant declines in global stock markets, resulting in a staggering loss of $6 trillion in value within a single week in February 2020[13]. In response, businesses implemented measures such as wage cuts and redundancies to mitigate losses, contributing to a surge in unemployment. The United Nations (UN) reported that the pandemic pushed millions into extreme poverty, thus erasing years (if not decades) of progress in poverty and hunger reduction[14].

While COVID has not been eradicated, societies have adapted and continue to manage their ongoing challenges. Vaccination campaigns and public health measures have controlled its immediate impact, but vulnerable populations, (particularly those with limited access to healthcare) remain at heightened risk should they contract the virus.

13 Reuters, February 2020. Coronavirus panic wipes $6 trillion off world stocks this week. Retrieved from https://www.reuters.com/article/global-markets-idUSL5N2AS6U4/ (Accessed: February 2025)

14 United Nations, 2021. Ending poverty and hunger once and for all – is it possible? Retrieved from https://www.un.org/en/desa/ending-poverty-and-hunger (Accessed: February 2025)

The emergence of long COVID (where individuals experience lingering symptoms even after recovering from the acute phase of the illness) has added complexity to the global health impact. This has prompted further research and efforts to understand and address its long-term consequences.

The pandemic's effects on various asset classes are further explored in section 7.7 of this chapter.

Beyond COVID-19, several other global health issues demand urgent attention. Mental health conditions (such as anxiety and depression) and health issues related to climate change (eg, changes in air quality; see section 3.10) are on the rise globally. Cardiovascular diseases, lower respiratory infections and diabetes continue to take a heavy toll on global health, requiring sustained efforts for prevention, treatment and support. Another priority is adapting health systems to meet the needs of ageing populations (see section 3.1 of this chapter), especially in addressing challenges related to dementia and other age-related conditions. In low- and middle-income countries, health outcomes remain significantly worse than those in high-income nations.

3.10 Climate Change

Global warming is almost certainly the biggest challenge and the greatest threat that humanity and our planet faces today. Unsustainable human activities have generated threats to the global environment, including climate change (associated with rising sea levels, extreme weather and flooding), resulting in destruction of ecosystems, loss of life, and disruption to food and fresh water supplies.

Concerns about the environment date back to the 1950s and 1960s, spurred by several widely publicised events (such as oil spills, the use of insecticides, and air and water pollution) and their impact on the human population and wildlife. Environmental awareness gained significant momentum in the 1980s, following disasters such as Chernobyl and the Exxon Valdez oil spill. As a result, investors became increasingly focused on environmental issues when making investment decisions.

Thus, in 1992, the UN Framework Convention on Climate Change (UNFCCC) was created. The UNFCCC is an international treaty with near-universal membership, having been ratified by 198 countries, making it one of the largest ever intergovernmental conferences on climate change. The parties to the UNFCCC (called the Conference of the Parties, or COP for short) meet every year to discuss issues related to, and assess progress in dealing with, climate change.

Of these meetings, COP21 (also called the Paris Agreement), which formally came into force in 2016, is the most well-known. It is particularly important due to its wide-reaching scope and the number of signatories involved. Aiming to limit global temperature increases to well below 2°C, preferably to 1.5°C of pre-industrial levels, primarily by reducing greenhouse gas emissions, is the first ever legally binding climate change agreement on all countries of the international community. It has been ratified by 196 countries, both developed (eg, the US, the UK and the EU) and emerging markets (eg, China, India and Saudi Arabia), representing over 95% of CO_2 emissions. However, the Agreement's credibility has been tested by the US withdrawal – during Donald Trump's first term as president, and again on the first day of his second term – thus raising concerns about the durability and enforceability of global climate commitments.

While the Agreement has been praised by politicians, green groups and the industry, some criticise it for not doing enough to reduce greenhouse gases. They argue that while the Agreement is supposedly legally binding, no sanctions or penalties are imposed for any countries not complying with the requirements, which could ultimately cripple the strength of the Agreement.

Other COP have taken place since COP21. To summarise:

- **COP26 in 2021** required world leaders to report on their previous committed climate action, for the first time since 2015. Additionally, they had to submit even more ambitious goals, called Nationally Determined Contributions (NDCs), for ending their contribution to climate change.
- At **COP27 in 2022**, world leaders agreed to establish a 'loss and damage' fund in a landmark agreement. This agreement involves rich nations providing compensation to poorer countries (which contribute less to climate change, yet are more vulnerable to its impacts) for the losses and damage they face due to climate change, and help them to deal with those impacts.
- **COP28 2023** marked the conclusion of the first global stocktake (GST). This assessment measures nations' advancements in fulfilling their Paris Agreement commitments, and outlines the next steps for ongoing progress.

Alongside COP, the United Nations (UN) has identified 17 goals to transform our world for the better, called the Sustainable Development Goals (SDGs). Defined by the UN as: '*the blueprint to achieve a better and more sustainable future for all*', essentially, these goals are a to-do list for all governments, companies, and other organisations, in addressing a range of global challenges by 2030.



Source: United Nations[15]

15 United Nations, 2024. The 17 Goals. Retrieved from https://sdgs.un.org/goals (Accessed: February 2025)

4. Global Trends and Their Impacts

Learning Objective

2.3.2 Understand the impact of the following on global trade and asset classes: international markets; trade agreements; tariffs; protectionism; globalisation of business and finance; market failures

So far, we have thought about the effects of various local factors, such as demographics, on an economy. However, a country's economy does not exist in isolation; it is also affected by what is happening in the rest of the world. In many ways, the effect of world events on countries' local economies and social environments is increasing – we call this effect globalisation.

4.1 International Markets

The world's financial markets face stiff competition from other financial centres, which try to compete for international business by introducing innovative financial instruments, ensuring speedier or more secure settlement, and/or making dealing cheaper and quicker. As competition can improve efficiency and global education, we should regard this as a positive outlook in the long term.

In addition to these longer-term considerations, financial markets are affected on a daily basis by what is going on overseas. Just as events in other countries affect a domestic economy, so they do the domestic stock market (which can be home to many multinational companies whose shares are traded on more than one stock market). Rates of growth in the rest of the world are especially important for economies that have a large foreign trade sector. If trading partners have slow growth, the number of exports a country can sell to them will grow only slowly. This limits the country's own opportunities for investment and growth.

Different national economies may be at different stages of the business cycle at any one time. However, with increasing globalisation of trade and investment, there is a tendency for their economic cycles to become increasingly correlated (tied in with one another). In particular, the large size and economic wealth of the US exerts a significant influence on the economies of other countries, particularly its major trading partners, such as China, Japan and the UK, among others.

The importance of the US in the world economy means that investment markets, such as equity and bond markets, often react most closely to what is happening in the economy and markets of the US. If there is an economic recovery in the US, it is anticipated that this recovery will soon affect other economies, as US consumers and companies will demand more goods and services available on world markets. The stimulus to other countries will have knock-on effects in those countries as companies' earnings are boosted and employment rises.

4.2 Globalisation of Business and Finance

In terms of business and finance, the term 'globalisation' tends to be used in several ways.

- It is often used to describe the increasingly interrelated and interconnected nature of business and financial systems. Businesses which were once essentially local now increasingly cross-borders: banks offer services in many different countries; and businesses find their raw materials, and sell to customers, much further afield than used to be the case.
- It is also used to describe the way in which various things (products, processes and, in some cases, lifestyles) are becoming more similar around the world – as people and businesses become more mobile, taking their ways of doing things with them, and as international standards are established to make it easier for international trade and activity to take place.

You can probably think of some examples easily, such as Apple and McDonald's. In the world of finance, HSBC (which provides banking, investment and other services) has thousands of offices in many countries; a customer of HSBC, or any other global banking organisation, could probably move from one country to another without having to change the banking group they deal with.

The pace at which trade and finance becomes globalised (and the rate of flow of goods, services and money around the world as a consequence) has also been helped by the efforts of governments and many multinational organisations. For example:

- The **World Trade Organization (WTO)** is an international body that helps negotiate global trade agreements. Among its aims is the liberalisation of trade laws between countries through the use of global multilateral agreements. It provides a forum in which governments can negotiate the basis on which their countries will trade with one another.
- The **Organisation for Economic Co-operation and Development (OECD)** describes itself as *'an international organisation helping governments tackle the economic, social and governance challenges of a globalised economy'*. Among other things, it aims to help contribute to world trade, and to support sustainable economic world growth. The OECD considers that the use of regional trade agreements (RTAs) helps strengthen the existing WTO framework and certain features adopted at regional level actually serve to complement the existing multilateral rules on global trade; today, RTAs account for over half of all international trade.

Globalisation is seen by some as good (for example, it enables poorer countries to participate in international trade) and by others as bad (for example, it results in the loss of national identities, or in the rise of multinationals whose huge size makes them beyond the control of governments and regulators). Whatever your view, increasingly, it is becoming a fact of life.

4.3 Market Failures

Market failures occur when freely functioning markets fail to deliver an optimum allocation of resources. This prevents equilibrium – a situation in which demand for products and services does not equate to the quantity supplied and, as a result, economic and social welfare may not be maximised and this could eventually lead to economic inefficiencies. Under such circumstances, there is a clear economic case for government intervention in markets to redress the economic balance and to restore equilibrium.

Governments can justify their interventionist policies by stating that they are acting in the best interests of the public when markets cannot achieve market efficiency. This is particularly relevant in cases where resource allocation within a market or industry is suboptimal , a situation known as Pareto inefficiency.

The main causes of market failure are as follows.

4.3.1 Externalities

These are activities that arise from the production and/or consumption of goods and services that affect other parties (either an individual, single entity, or society as a whole), but for which no appropriate compensation is paid (ie, spillover).

Externalities can be both positive and negative. Generally, as their names suggest, positive externalities have positive effects, while negative ones have negative effects. To give some examples:

- Investment in education is a positive externality. When education is affordable and easy to access, this benefits society as a whole. Educated individuals are likely to be able to command higher wages, while employers have access to a wider pool of knowledgeable and trained employees.
- One commonly known negative externality is pollution. For example, pollution from a factory that occurs in the process of producing goods. As well as having a detrimental effect on the environment, the residents living in that area are exposed to that pollution. This may cause them health issues, and they may be responsible for covering their own healthcare costs.

Externalities can cause market failure if the price of a good/service does not accurately reflect the true costs and benefits of that good/service.

4.3.2 Public Goods

The characteristics of pure public goods are the opposite of private goods. In fact, most are services rather than goods. These services are clearly in demand but must be provided collectively by the government for two main reasons:

- **Non-excludability** – goods cannot only be confined to those who have paid for them. However, there is always the problem that non-payers can take a free ride and enjoy the benefits of consumption of the goods.
- **Non-rivalry in consumption** – consumption by one person does not reduce the availability of the same goods to others.

Some examples of public goods/services include police services, flood defence systems, street lighting, public parks and beaches and national defence. Public goods are not normally provided by the private sector in an economy and because of their nature, the private sector is unlikely to be willing and able to provide public goods. The government therefore provides them for collective consumption and finances them through general taxation.

4.3.3 Merit Goods

Merit goods are goods and services that the government or society regards as necessary to avoid under-consumption. The government feels obliged, therefore, to subsidise or provide the goods/services free at the point of use.

Both the public and private sector of the economy can provide merit goods and services. Consumption of merit goods is thought to generate positive externality effects when the social benefit from consumption exceeds the private benefit (for example, health services, education, work training, public libraries, citizen's advice, inoculations).

Public private partnerships (PPPs) are a special type of contract (typically over the long term) between a public sector authority (eg, the government) and one or more private sector companies. They tend to be within the infrastructure sectors, such as transport, energy, healthcare and education. Through this type of arrangement, PPPs aim to share the associated risks among all involved; it would not be viable for any single business or entity to take this on alone. As a result, it is more likely for projects to be completed more quickly and efficiently.

4.3.4 Monopoly and Oligopoly

Monopoly and oligopoly are discussed in section 2.4.2. These market structures can lead to inefficiency, as agents operating within them can gain market power, thus preventing competitors from entering the market, and/or allowing them to artificially fix prices higher and reduce output compared to free-functioning competitive markets (where there are many suppliers).

4.3.5 Inequality

Market failure can also be caused by the existence of income and wealth inequality throughout the economy, as covered in section 3.5.

Governments may decide to reduce inequality through changes to the tax and benefits system and also specific policies, such as a national minimum wage.

Such interventions aim to correct distortions created by market failure and improve market efficiency. For example, this can include the taxing of monopoly profits (such as a windfall tax), implementing pollution taxes to correct for externalities, and introducing policies to introduce competition into market (such as deregulation).

4.4 Trade Agreements and Tariffs

Trade agreements are when two or more nations agree on the terms of trade between them. Trade agreements determine the tariffs (taxes and duties) that countries impose on imports and exports.

Below are some of the types of trade agreements:

- **Unilateral trade agreements** are when one country either imposes trade restrictions, or loosens them, and no other country reciprocates. Many developed countries often do this as a type of foreign aid to help emerging markets strengthen certain industries.
- **Bilateral trade agreements** are between two countries. Both countries would agree to loosen or remove trade restrictions to expand business opportunities. They typically involve lowering tariffs and conferring preferred trade status with each other.
- **Multilateral trade agreements** are among three or more countries. Since they involve negotiations among multiple parties or nations, they are more difficult to negotiate than unilateral or bilateral trade agreements. However, once negotiated, they are very powerful; this is because they cover a larger geographic area, conferring a better competitive advantage on the signatories. All countries in a multilateral agreement give each other most favoured nation status, which means they treat each other equally.

Once agreements move beyond the regional level, they usually need assistance, and this is where the WTO steps in. Once agreements are in place, the WTO enforces the agreement and responds to complaints. The WTO currently enforces the General Agreement on Tariffs and Trade (GATT), a legal agreement between many countries that aims to promote international trade by reducing or eliminating trade barriers, such as tariffs or quotas.

Following the end of the transition period with the EU, the UK's trade agreements with the EU no longer apply. To ensure business continuity, the UK has undertaken efforts to reproduce the effects of the trading agreements that were previously in place. A list of countries that the UK has trade agreements with is available online[16].

4.5 Protectionism

Protectionism (or trade protection) is the deliberate attempt to limit imports or promote exports by putting up barriers to trade. Despite the arguments in favour of free trade and increasing trade openness, protectionism is still widely practised. Protection of domestic industries may allow them to develop a comparative advantage; for example, domestic firms may expand when protected from competition and benefit from economies of scale. As firms grow, they might invest in real and human capital, and develop new capabilities and skills. Once these skills and capabilities are developed, there is less need for trade protection, and barriers may be eventually removed. Retaining some self-sufficiency is, however, seen as a sensible economic strategy given the risks of global downturns and an overreliance on international trade.

The US-China trade war is an example of protectionism. This began in 2018 under the administration of US president Donald Trump, and it eventually led to the US and China imposing tariffs on billions of dollars of goods imported from the other. While Trump's first presidency ended in 2021, the Biden administration retained the tariffs on China. In his second presidency (which began in 2025), Trump has once again introduced tariffs on China among other countries/regions, and on specific goods being imported into the US.

16 GOV.UK, November 2022 (last updated: February 2025). UK trade agreements in effect. Retrieved from https://www.gov.uk/guidance/uk-trade-agreements-in-effect (Accessed: February 2025)

5. Economic and Business Cycles

Learning Objective

2.3.3 Understand the main stages of economic, financial and stock market cycles, including: trade cycles; business cycles; asset price bubbles; economic shocks; difficulty in forecasting national and international trends

5.1 The Trend Rate of Growth

Over the long term, economies usually display an underlying positive rate of growth, known as the trend growth rate. This defines an economy's potential output level or full employment level of output – that is, the sustainable level of output that an economy can produce when all of its resources are productively employed.

There are many sources from which the trend rate of growth can emanate. Ultimately, though, it depends on:

- the growth and productivity of the labour force
- the rate at which an economy efficiently channels its domestic savings and capital attracted from overseas into new and innovative technology and replaces obsolescent capital equipment, and
- the extent to which an economy's infrastructure is maintained and developed to cope with growing transport, communication and energy needs.

When an economy is growing more than its trend growth rate, actual output will exceed potential output, often with inflationary consequences. However, when a country's output contracts (ie, its economic growth rate turns negative for at least two consecutive quarters), the economy is said to be in **recession**, or entering a deflationary period, resulting in spare capacity and unemployment.

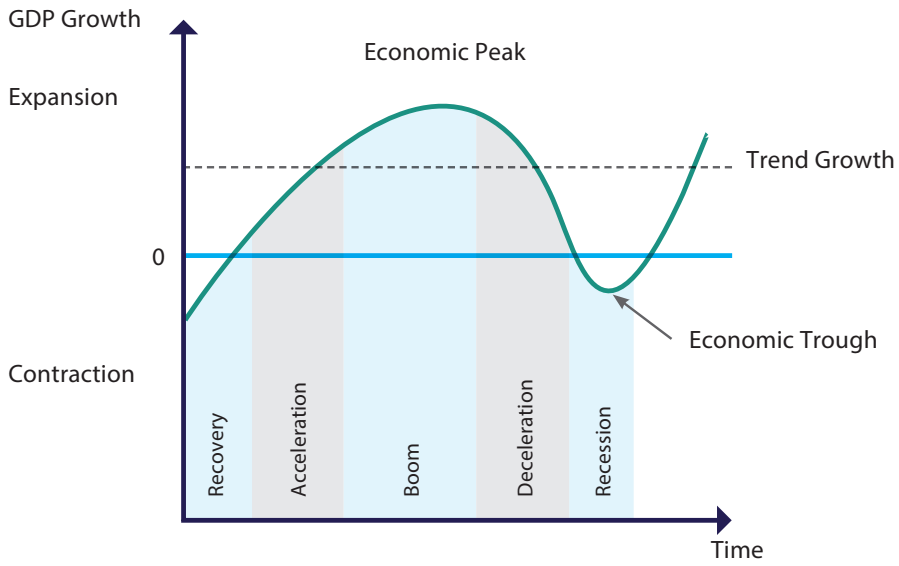
5.2 The Economic Cycle

Unlike in micro-economics, where the establishment of a market-clearing price in a single market brings supply and demand into equilibrium, in macro-economics the interaction of individual markets and sectors may cause the economy to operate in a state of disequilibrium, often for significant periods of time. This is considered in section 4.3.

The fact that actual growth fluctuates and deviates from the trend rate of growth in the short term gives rise to the economic cycle, also called the business cycle or trade cycle (so called because it represents the cyclical nature of economic activities).

Economic cycles typically assume four stages:

- **Recovery** – also called acceleration or expansion, a period when the economy is growing. If this recovery lasts long enough, the economy enters a boom period (ie, a period of fast economic growth).
- **Peak** – the highest point of the economic cycle.
- **Slump** – also called deceleration or contraction, a period when the economy slows down due to a reduction in demand. If this slump lasts long enough, the economy enters a recessionary period (ie, a period of declining economic performance).
- **Trough** – the point at which the slowing ceases, and the economy has hit a bottom from which the next phase of the cycle (ie, recovery) emerges.



These cycles describe the course an economy conventionally takes, usually over a seven- to ten-year period. The length of a cycle is measured between successive economic peaks (or troughs). In practice, though, it is difficult to identify exactly when one stage ends and another begins, or to quantify the duration of each stage.

The stage of the cycle in which an economy finds itself impacts the performance of various asset classes (see section 7.7). Empirical evidence shows that when the short-term peaks and troughs of conventional cycles are ignored, then cycles of 50 years or so tend to shape economies. These Kondratieff cycles (or super-cycles) are driven by the benefits of innovation and investment in new technology.

Investment (ie, the spending on capital goods such as machinery, equipment and infrastructure, with the expectation of generating future income and profits) plays a key role in the economic cycle. During economic expansion, businesses increase investments in response to positive economic indicators, thus fostering growth, job creation and increased production. However, nearing the peak, signs of overheating prompt governments and central banks to implement tightening measures; this tends to result in a reduction in investments, contributing to job losses and a decrease in overall economic activity, in turn leading to a contractionary phase.

What happens in a boom	What happens in a recession
• Businesses produce more goods. • Businesses invest in more machinery. • Consumer confidence is high, so consumers spend more money. • Employment levels are high and wages rise. • Less money is spent by the government on unemployment benefits. • More money is collected by the government in income tax and VAT. • Prices tend to increase due to extra demand.	• Businesses cut back on production. • Businesses reduce investment and, in some cases, may go bankrupt. • Consumer confidence falls, so consumers spend less money and save more. • Individuals may lose their jobs. • More money is spent by the government on unemployment benefits. • Less money is collected by the government in income taxes and VAT. • Prices start to fall, with a fall in household incomes leading to reduced demand for goods and services.

During periods of contraction, prudent policymakers seek to achieve a **soft landing** to minimise disruptions and prevent a **hard landing**. The latter scenario often results in an economy entering a stagnant phase or even a recession, which poses challenges to sustained growth and stability.

A variety of different economic indicators shows cyclical movements of expansion and contraction in economic activity over time. See section 5.2 for more on these indicators.

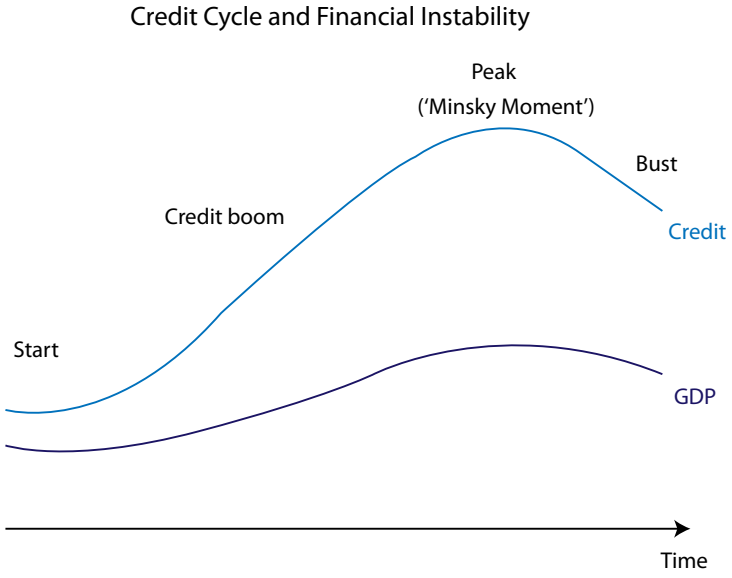
5.3 Asset Price Bubbles

In an asset bubble, the price of an asset rises rapidly such that it deviates from its fundamental value. This is followed by a reversal of expectations and a sharp decline in the price (ie, a crash).

Three main conditions contribute to the cause of an asset bubble:

- **Low interest rates** – this makes it easy for investors to borrow money cheaply; they then attempt to obtain more attractive yields by investing into higher-risk asset classes, thus increasing prices.
- **Asset shortage** – when investors think there is a shortage of a particular asset, this causes an imbalance between supply and demand, which can lead to prices rising above the asset's value.
- **Demand-pull inflation** – this type of inflation is caused by too much money chasing too few goods. When buyers' demand for an asset exceeds the available supply, the sellers of that asset may then raise the prices to capitalise on that demand.

According to the Minsky cycle – named after American economist Hyman Minsky – a sudden, major collapse in asset values marks the end of a growth phase in the economic cycle.



5.4 Economic Shocks

An economic shock is defined as an event that produces a significant change within an economy, despite occurring outside it. Economic shocks are unpredictable and typically impact supply or demand throughout the markets. An economic shock may come in a variety of forms. A shock in the supply of staple commodities, such as oil, can cause prices to skyrocket, making them expensive to use for business purposes. The rapid devaluation of a currency will produce a shock for the import/export industry because a nation will have difficulty bringing in foreign products.

5.5 Trend Forecasting

Governments and international organisations try to look forward and influence not only the short-term economic outlook, but also to learn from analysing longer-term trends, and to influence these trends as well. Even quite small changes in growth, year-on-year, can have a considerable cumulative effect over a longer period.

For example, the UK government has a stated aim of increasing long-term growth (ie, as the trend rate of growth) through strategies aimed at increasing employment opportunities and productivity by promoting economic stability and by way of its wider economic policies. The UK's use of monetary policy to influence the economic cycle is covered in section 7.3.

6. Key Economic Indicators

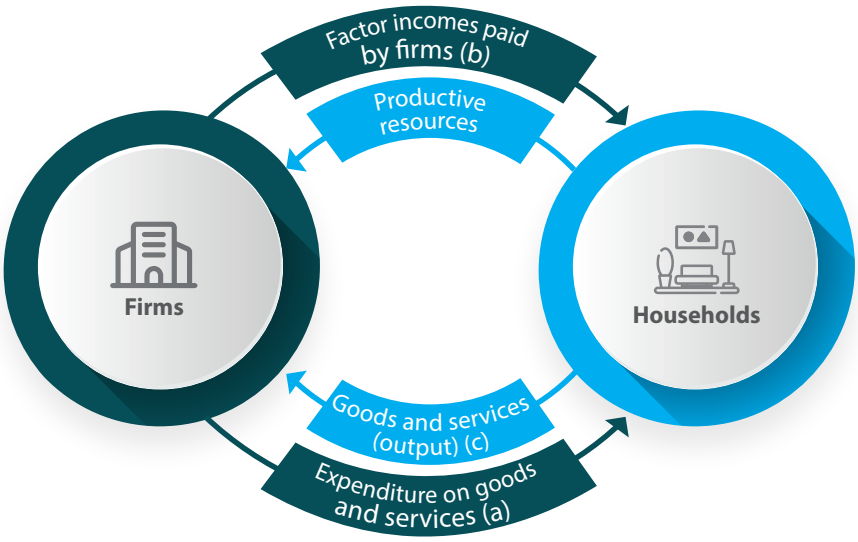
Learning Objective

2.3.4 Interpret key economic and business indicators: gross domestic product (GDP); inflation; interest rates; consumer price and inflation indices; retail sales; unemployment rate; industrial production; stock market indices; money supply changes; foreign exchange rates; leading, lagging and coincident indicators; procyclic and countercyclic indicators

A variety of different economic indicators show cyclical movements of expansion and contraction in economic activity over time, which we will now consider.

6.1 National Income, Gross National Product and Gross Domestic Product

The following simple diagram shows how income is generated and circulates in an economy:



- In order to make the goods and services they provide, firms must use labour provided by households. They have to pay those households for the labour they provide, thus providing the households with income.
- Households must pay firms for the goods and services they need. The income of firms is thus the sales revenue from the sale of goods and services.

This creates a circular flow of income and expenditure; income and output are different sides of the same coin. This diagram assumes a closed economy (ie, there is no leakage of income to overseas providers).

We can measure the activity shown in the above diagram in the economy in different ways. The measure chosen will depend on which aspect of the above flow we are focusing on.

Three key measures of economic activity are national income (NI), GDP and GNP (although technically national income has a particular definition, generally you will find all of these measures are loosely referred to as 'national income').

6.1.1 National Income (NI)

National income is the total income of residents of a country, which arises from the production of goods and services produced by that country.

NI is also called net national product. Note that the terms 'income' and 'product' are two different aspects of the same circular flow of income around an economy. 'Net' means an amount for capital consumption or depreciation of fixed assets has been deducted from the gross figure.

Measuring national income is useful for the following purposes:

- measuring the standard of living in a country (national income per head)
- comparing the wealth of different countries
- measuring the change in national wealth and the standard of living
- determining long-term trends, and
- assisting central government in its economic planning.

6.1.2 Gross Domestic Product (GDP)

National income is largely derived from economic activity within the country itself. Domestic economic activity is referred to as total domestic income or domestic product, measured gross (ie, before deducting an amount for capital consumption or depreciation of fixed assets). The term 'GDP' refers to the total value of income/production from economic activity within a country.

6.1.3 Gross National Product (GNP)

As we noted above, the diagram showing the circular flow of income in the economy assumes it is closed. In reality:

- Some of the UK's national income arises from overseas investments.
- Some of the income generated within the UK is earned by people who are non-residents.

The difference between these items is net property income from abroad.

We can therefore show the relationship between GDP, GNP and national income as:

$$\text{GNP} = \text{GDP} + \text{Net property income from abroad}$$

$$\text{National income} = \text{GNP} - \text{Capital consumption}$$

6.1.4 Injections and Withdrawals

In addition to using total incomes in the circular flow as a measure for national income, we can use a method that measures total expenditure in the economy.

We add a number of injections to, and withdrawals from, the circular flow. These arise from:

- **Savings by consumers** – withdrawal, since money is no longer circulating if it is being saved.
- **Investment flows into firms** – injection, since firms can use this money in their economic activity.
- **Imports** – withdrawal, since money goes overseas to pay for goods and services from abroad.
- **Exports** – injection, since overseas buyers make payments into the UK for goods and services.
- **Government spending** – injection, since the government adds to the revenues of firms providing it with goods and services.
- **Taxation** – withdrawal, since it reduces household income available to spend on goods and services.

From this, you can see that we are moving away from (or at least building on) the simplified, closed economy model introduced at the beginning of this section.

Gross domestic product (GDP) is made up of:

$$GDP = C + I + G + (X - M)$$

where:

C	=	consumer expenditure (ie, spending by households)
I	=	private investment in firms
G	=	government spending
X	=	exports
M	=	imports
X – M	=	the balance of payments

This measure provides one way of assessing the level of national economic activity. It also shows us that if a government wants to influence activity levels, it may be able to do so by influencing one or more of the components of the formula above.

As we have seen, it is possible to measure the amount of economic activity, or output, in a national economy. This is done by adding together all the incomes generated to give a total figure for national income.

The larger the national income in a country, the higher its average income. A rising level of income leads to more spending on the output of firms, and more spending means more output of goods and services. Providing that such increases are not simply due to inflation, then they should result in an improved standard of living. Economic growth – reflected in rising national income – is a key economic policy objective for most governments. Ideally, this growth should be stable and steady, rather than erratic and uncontrolled.

6.2 Inflation Indices

Inflation describes the general increase in price levels (or, alternatively, the decline in the purchasing power of money).

Inflation is an important concern for investors (who may see the real value of their investment erode if growth does not keep pace with it) and borrowers (who are allowed to pay back lenders with money that is now worth less than when the loan was taken out).

Inflation is measured by reference to an index, made up of a notional basket of all the things the average person is assumed to spend their money on. However, in reality, different people spend their money on different things – so there are several inflation indices, reflecting different ways of calculating the general rise in price levels and the cost of living. These indices are used for several purposes – for example:

- as an indicator of inflationary pressures in the economy
- as a benchmark for wage negotiations, or
- to determine annual increases in government benefits payments.

Note, though, that some items experience higher price increases than others over time (eg, tobacco products and private school fees), so any chosen index may not necessarily reflect the inflationary pressures that a particular household actually faces.

One of the most universal metrics is the consumer price index (CPI). This is the price of a weighted average of prices of a basket of consumer goods and services that are associated with the cost of living – for example, food, transportation and medical care. Thus, the CPI is an international comparative measure of inflation.

In the UK, another measure is the **retail price index (RPI)** which has been around for some years. Sometimes referred to as the headline rate of inflation, RPI is the rate often cited by unions as a benchmark for agreeing wage settlements. The UK government used to target a rate of inflation known as RPIX (the same as RPI but excluding mortgage interest payments); this was changed to CPI in 2003, to align the UK with Europe's harmonised index of consumer prices (HICP). The CPI is also the UK government's preferred inflation target, on the basis that:

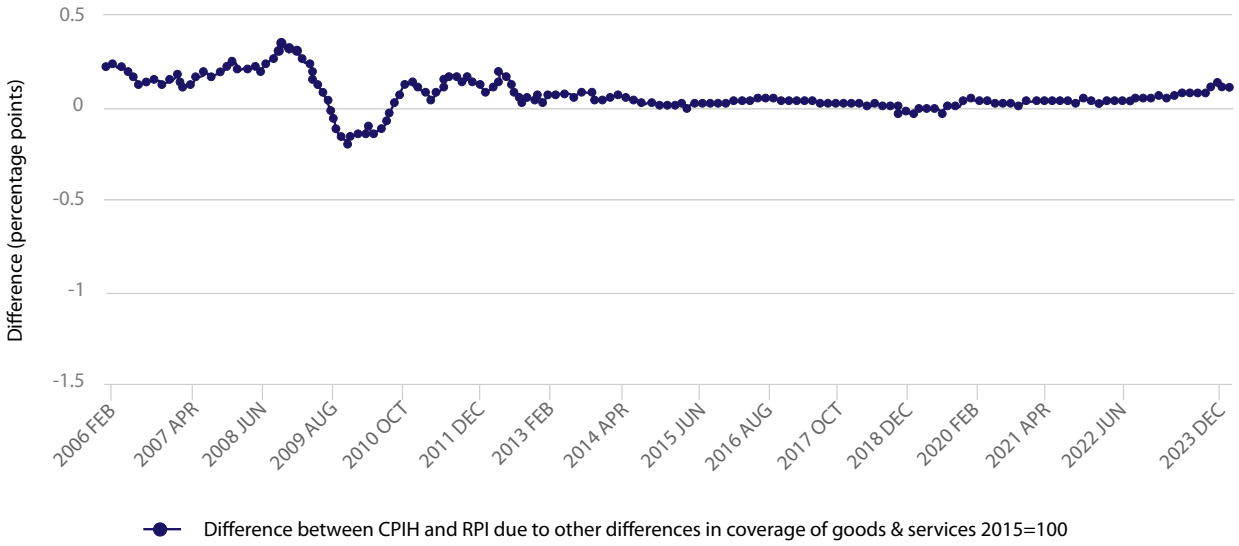
- the CPI basket offers more realistic patterns of consumer behaviour and consumption
- it is a comparable measure for referencing the rate to international economies for price levels and changes, and
- it represents international best practices.

Notably, though, the CPI and RPI come up with different values for several reasons:

- There are slight differences in items that are contained in each measure – for example, RPI includes an element of housing costs, while the CPI excludes them.
- The CPI measure contains a broader range of items than the RPI.
- Depending on the measure, some of the items in the baskets may have higher weightings to reflect consumer spending patterns.

- The method of calculating the weighted average of each index is different – the CPI utilises the geometric mean, while the RPI uses the arithmetic mean. Effectively, this means that for naturally volatile time series of index values that are taken over successive months, the CPI will always yield a lower rate of inflation than the RPI.

Difference Between CPIH and RPI due to Other Differences in Coverage of Goods & Services 2015 = 100



Source: Office for National Statistics[17]

In the UK, the government's CPI target is 2%. If the CPI is more than 1% either side of this target, then the Governor of the BoE must write an open letter to the Chancellor explaining the reasons why, and what the BoE proposes to do to ensure that inflation comes back to target.

Even though the CPI is the UK government's preferred inflation target, pensions, benefits and index-linked gilts continue to be calculated using the RPI.

The 'shopping basket' of items used in compiling the various measures of inflation is reviewed annually, so can change over time – this ensures the measures are up-to-date and represent patterns in consumer spending.

In 2023, for example, the ONS added 26 items (eg, e-bikes, security or surveillance cameras, and frozen berries) to the CPIH basket and removed 16 items (eg, digital compact cameras, spirit-based drinks, and non-chart CD albums bought in store)[18].

17 Office for National Statistics, January 2024. Difference between CPIH and RPI due to other differences in coverage of goods & services. Retrieved from https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/cpti/mm23/ (Accessed: February 2024)

18 Office for National Statistics, March 2023. Consumer price inflation basket of goods and services: 2023. Retrieved from https://www.ons.gov.uk/economy/inflationandpriceindices/articles/ukconsumerpriceinflationbasketofgoodsandservices/2023 (Accessed: February 2024)

Other nations have their own inflation targets. In the US, for example, the Fed seeks to achieve inflation that averages 2% over time; the ECB has a symmetric 2% target over the medium term (in other words, it must respond when inflation is too low, as well as when it is too high); and China's government has a target CPI of 3%.

It is worth noting that high levels of inflation can cause the following problems:

- Businesses have to continually update prices to keep pace with inflation.
- Employees find the real value of their salaries eroded.
- Those on fixed levels of income, such as pensioners, will suffer as the price increases are not matched by increases in income, thus leading to a decrease in living standards.
- Exports may become less competitive.
- The real value of future pensions and investment income becomes difficult to assess, which might act as a disincentive to save.

However, there are some positive aspects to high levels of inflation:

- Rising house prices contribute to a feel-good factor (although this might contribute to further inflation as house owners become more disposed to borrowing and spending).
- Borrowers benefit, because the value of borrowers' debt falls in real terms.
- Inflation also erodes the real value of a country's national debt and so can benefit an economy in difficult times.

6.3 Interest Rates

The manipulation of interest rates is a type of monetary policy, often used to control inflation by influencing how much money is in circulation within an economy. In general, reducing interest rates makes saving less attractive, thus it helps to inspire borrowing and spending (ie, inflation increases), while the converse is true in a rising rate environment.

Generally, a nation's central bank is responsible for setting monetary policies within that nation – this is the Bank of England's (BoE's or the Bank's) Monetary Policy Committee (MPC) in the UK (see section 7.3), the Federal Reserve (or Fed for short) in the US, the European Central Bank (ECB) in the EU and the People's Bank of China (PBOC) in China, to name a few. Monetary policy may vary between countries although generally, economies aim for low and stable inflation and have publicly announced inflation targets (see section 6.2).

When you hear talk of the central bank adjusting interest rates, it is adjusting the rate at which it lends money to banks, known as the base rate. If base rates change, banks may change the interest rates on their savings and lending products, such as those earned on deposits, or charges on a credit card or a variable mortgage (although not necessarily to the same degree). This is because banks cover their costs by paying less on savings than they make on lending and if they pay less than 0% on savings (negative interest rates, whereby savers pay the bank to hold money in their savings account) then savers may take their money elsewhere.

Central banks can set negative interest rates to encourage borrowing, stimulate economic activity and address deflationary pressures. In practice, though, the application of negative interest rates is complicated, and evidence as to whether their work is mixed. For example, negative rates on credit cards and mortgages could squeeze banks' profit margins to the point where they are willing to lend less. Additionally, data suggests that businesses and savers would rather hold their own cash than paying a bank to hold it for them, and in losing this major source of funding, banks would have less money to lend. This could lead to a rise in interest rates, to encourage savers to save again, which is the exact opposite of what negative interest rates are trying to achieve! (However, this has not prevented several central banks, such as in Japan and Switzerland, from adopting them historically.)

Investors watch changes in interest rates very closely. An increase in interest rates not only slows down consumer spending, but will also hit the future performance of companies. Higher interest rates make it more expensive for firms to expand their business operations by borrowing money or issuing debt, because they will have to pay a higher interest rate on their loans. High interest rates have a secondary effect of encouraging investors to switch out of equities and into low-risk cash instruments, thereby further depressing share prices.

6.4 Retail Sales

Retail sales are an indicator of household consumption. They are an important economic indicator because consumer spending drives much of our economy. Think of all the people and companies involved in producing, distributing, and selling the goods you use on a daily basis like food, clothes and fuel. When consumers open their wallets, the economy tends to grow steadily. Retail shelves empty and orders are placed for replacement merchandise. Production increases, creating a virtuous cycle so long as inflation is contained.

However, if consumers feel uncertain about their financial future and decide to hold off buying new refrigerators or clothing, the economy slows down. This is why politicians may resort to tax cuts to give the economy a boost. By putting cash in consumers' hands, they hope consumer spending will help the economy move out of a recession.

6.5 Unemployment

The unemployment rate measures the number of people available for work and seeking employment. Labour statistics offer a general sense of the state and direction of the economy as a whole. If unemployment is on the rise or few new jobs are being created, it is a sign that companies themselves are not expanding their businesses and the economy may be slowing down. On the other hand, tight labour markets and large-scale job creation indicate a growing, or even overheated, economy.

There are three types of unemployment:

- **Cyclical** – occurs as a result of the market cycle. During a period of high growth, firms will employ more workers; while jobs are lost when the economy slows and enters recession.
- **Frictional** – occurs when individuals are in the process of changing jobs, eg, resignation (voluntary form) and termination (involuntary). Other types are seasonal employment (ie, during certain times of the year) and term employment (an appointment for a specific and limited period of time).

- **Structural** – occurs as a result of a mismatch between what the unemployed can offer and what companies need. It is exacerbated by other factors such as technology competition and changes in the economy (eg, deindustrialisation). As such, it can occur during a period of strong economic growth.

The reaction of markets to news about unemployment can often seem paradoxical. If the economy is doing well, investors will fear that a fall in unemployment (which you would think would be good news) will be inflationary (more people in work and spending money). Very low unemployment can also be a sign of labour shortages. On the other hand, a fall in unemployment during a recession is good news for the markets as it suggests an improvement in the overall state of the economy.

In recent years, it has not only been the level of employment, but also the quality of jobs, that has been at the centre of media attention. For example, a rise in the number of workers in the gig economy (where workers have no obligation to provide any minimum working hours and, at the same time, are not obliged to accept any work offered). While the gig economy offers a more flexible approach to employment, potentially leading to increased productivity, there are concerns surrounding workers' legal rights. Other examples include steps to withdraw from the International Convention of Human Rights and moves by governments to curtail union power.

6.6 Industrial Production

Industrial production measures the change in output for the industrial sector of the economy. The industrial sector includes manufacturing, mining and utilities. Although these sectors may contribute only a small portion of a country's GDP, they are highly sensitive to interest rates and consumer demand. This makes industrial production an important tool for forecasting future GDP and economic performance. Industrial production figures are also used by central banks to measure inflation, as high levels of industrial production can lead to uncontrolled levels of consumption and rapid inflation.

6.7 Stock Market Indices

National stock market indices represent the performance of a specific nation's stock market and are perceived as investor sentiment on the state of the economy. Rising indices generally indicate optimism about economic growth, while falling indices may suggest concerns of a downturn.

The most regularly quoted market indices consist of stocks of large companies, listed on a nation's largest stock exchanges. Some of the world's main indices, as well as the ways in which they can be constructed, are covered in chapter 8, section 1.2.

In some cases, though, the index may contain a substantial number of foreign or multinational companies (eg, the UK's FTSE 100), making it less reflective of the national economy. In such instances, it is usual to look at the next level of indices (eg, the FTSE 250) as a key barometer of economic health and investor sentiment.

Even so, the phrase 'the stock market is not the economy' is often used by financial analysts and economists. Arguably, fluctuations of stock market indices have little impact on the average household, as the majority of shares are traded among the super-wealthy.

Further, stock market indices are forward-looking, in that share prices are based not only on present earnings but also expectations of future earnings potential.

6.8 Money Supply Changes

In section 7.5 of this chapter, we will look at various ways of measuring the money supply (also known as money stock). This is the total amount of money circulating in an economy. We will also look at narrow money and broad money and at the more formal definitions. The amount of money in circulation, and changes in that amount, are important to the economy, chiefly because of the impact this is assumed to have on prices (and, in turn, on inflation).

6.9 Foreign Exchange Rates

Foreign exchange (FX or forex) rates are the rates at which one country's currency may be exchanged for that of another country. The exchange rate is the price of one currency, in terms of another, details of which are covered in chapter 1, section 1.12.

A country's currency exchange rate with other countries is important for the health of its economy. For example, FX rates can impact the cost of importing and exporting goods, hence they are a key consideration for businesses operating internationally, and they can have a major impact on the balance of payments (see section 7.6).

6.10 Economic Indicators and their Characteristics

In relation to the economic business cycle, each economic indicator can be considered to have one of the following attributes that tracks and responds to changes in an underlying economic factor.

- **Procyclic** indicators are characterised by directional movement that moves in step with the overall movement of the economy (in other words, they rise in periods of economic expansion). Examples include GDP, the rate of growth of consumer spending, job vacancies and investment. An increase in a procyclic indicator will be reflected in a strong economy; conversely, if it decreases, it means that the economy could be headed for a recession.
- **Countercyclic** indicators move in the opposite direction to the economic growth trend. The unemployment rate is such an indicator: unemployment often increases when the economy is in a contractionary phase and drops when economic growth is accelerating.

Economic indicators are characterised further by their timing properties in response to developments that may be taking place in the underlying economy. These economic indicators can be leading, lagging, or coincident.

- **Leading indicators** usually change before the economy as a whole, so are useful as short-term predictors. Stock market index returns are a leading indicator, hence why economists sometimes suggest that the stock index of a country is a barometer of the health of the economy. Other examples are the index of consumer expectations, building permits and the money supply.
- **Lagging indicators** are indicators that usually change after the economy as a whole does. Typically, the lag is a few quarters of a year. The unemployment rate is a lagging indicator: employment tends to increase two or three quarters after an upturn in the general economy before it dips.

- **Coincident indicators** are those which change at approximately the same time as the whole economy, thereby providing information about the current state of the economy. Examples include personal income, GDP, industrial production and retail sales.

6.11 Difficulties in Forecasting National and Interest Rate Trends

Forecasting national and economic trends in a single country and on a global scale is a highly specialised and challenging activity for econometricians.

Essentially, forecasting as an activity aims to identify and track past trends and then extrapolate into the future. A series of economic data such as interest rates, economic growth or inflation data is tracked regularly over a historic time period. The data is obtained in the form of a time series that is then projected forward by using statistical/econometric techniques.

As looking into the future naturally involves a varying degree of uncertainty, sometimes a distinction is drawn between forecasting and projections. In certain contexts, particularly economic ones, forecasting is used to refer to short-term extrapolations associated with a reasonable degree of certainty. Projections are considered to be longer term, more sophisticated, but also less reliable. This distinction does not always hold true, for example, demographic projections can be very reliable over the time span of a generation.

There are two main types of trend analysis: quantitative and qualitative analysis.

6.11.1 Quantitative (Statistical) Analysis

Quantitative trend analysis is probably the most common forecasting method. It relies on the statistical analysis of historical data – in other words, it is relatively objective. Quantitative techniques include extrapolation (such as moving averages, linear projections against time or exponential smoothing) and econometric methods (typically using regression techniques to estimate the effects of causal variables). This type of analysis is commonly used to forecast demographic and economic changes when extrapolating over time is believed to have some validity.

Other techniques for short- to medium-term analysis and forecasting include:

- **Modelling** – an extremely useful tool for quantitative analysis.
- **Estimation** – one of the key difficulties in conducting forecasting is a lack of available data. If this is the case, estimation may be suitable.
- **Triangulation** – when developing a model, data is often incomplete or approximate. In other instances, you may have several sources of data that conflict. One way of developing a base to work from is to triangulate the available information to develop a defensible average.

6.11.2 Qualitative (Judgemental) Analysis

Qualitative trend analysis is more subjective and is concerned mainly with social, institutional, commercial and political themes (ie, things which may not be linearly related to the past). For example, qualitative trend analyses deal with issues such as:

- What is the future of trade unions?
- What is the future of political parties or non-governmental organisations (NGOs)?
- What is the future of the entertainment business?

One of the most common forms of qualitative trend analysis is the identification of 'megatrends'; in other words, driving forces which can change society in all spheres (eg, politics, economics, technology, values and social relations). Other tools include scenarios and analogies.

Qualitative analyses can be applied to most areas but work best when focusing on real change. Megatrends apply to all areas, within the defined time and setting. It is important, though, to be aware that megatrends themselves may produce powerful countertrends, and that they may interact with each other.

Strengths	Weaknesses
• Quantitative forecasts are usually more objective, relatively inexpensive and easy to use (contingent upon some knowledge of statistics). • Qualitative forecasts can be valuable predictors of new trends by using the creativity and good judgement of experts.	• Quantitative forecasts can be misleading. The past is not always predictive of the future and such forecasts do not consider unpredictable changes or discoveries (eg, discovery of new natural resources) or wild cards (eg, unexpected acts of terrorism). • When using qualitative techniques to identify possible new trends, it will always be the case that some or maybe even all of the results are eventually disproved. It is particularly difficult to distinguish between short-term fads and long-term trends.

7. Fiscal and Monetary Policy

Learning Objective

2.4.1 Understand the role of government and central banks in fiscal and monetary policy: interest-rate-setting process; quantitative easing and quantitative tightening; unwinding of central bank balance sheets; money market operations; fiscal stance; other interventions

7.1 General Economic Policy Aims

As well as providing a legal and regulatory framework for economic activity, the government plays a role in managing the economy. Among the aims of a government's economic policy may be the following:

- **To achieve sustainable real growth in national income per head of the population** – the idea of sustainable growth implies that major fluctuations in the business cycle are avoided, and that output grows on a steady upward trend. This is generally seen as the most important goal of a government's economic policy.
- **To control inflation in prices** – this has become a central objective of economic policy in many countries in recent years.
- **To achieve full employment** – while the aim for a government is to keep employment as high as possible, in practice there is always some residual or frictional unemployment. Full employment is considered to be about 3–5%, implying that the economy is functioning close to maximum capacity.
- **To achieve a trade balance** – generally, it is in an economy's interests for the government to aim for a trade surplus, as it is a way to earn the extra amount from exports of the goods it produces. In the UK, however, a trade deficit is always run because the economy is heavily reliant on imports and the manufacturing base is not wide or deep enough to meet local demand for such goods.

7.2 Fiscal Policy

Fiscal policy is government policy on taxation, public borrowing and public spending.

- Direct taxation is taxation of incomes and, in some cases, wealth (as with inheritance tax (IHT)).
- Indirect taxation is taxation of products and services (eg, VAT).

As we saw in section 2.2.1 of chapter 1, in the UK, the amount that the government must borrow each year is known as the public sector net cash requirement (PSNCR). When the UK government is running a budget deficit, this means that total public expenditure exceeds revenue, which it has to fund through the issue of government debt.

Generally speaking, a government might intervene in an economy by changing the level and types of taxes, the extent and composition of spending and the degree and form of borrowing.

In this regard, a government's fiscal stance may be expansionary, contractionary or neutral, according to its overall effect on national income:

- **Expansionary** – spending more money and financing this expenditure by borrowing, or collecting less in taxes. Spending will increase and so national income will tend to rise, either in real terms, or in terms of price levels only; that is, the increase in national income may be real (ie, there is growth even after the effects of inflation are stripped out), or it may be simply inflationary.
- **Contractionary** – collecting more in taxes without increasing spending. A government may deliberately raise taxation to take inflationary pressures out of the economy.
- **Neutral** – collecting more in taxes in order to increase spending, thus diverting income from one part of the economy to another. Governments can redistribute wealth (as measured through net income) through such activities.

If a government raises taxes and spending by the same amount, so that its overall budget remains in balance, there will be an increase in aggregate demand. This is because taxpayers would otherwise have saved some of the money they pay in increased taxes; but instead, the government spends all of it within the economy. The net effect is that more money gets spent, albeit by a different party (in this case, the government itself). This effect is known as the balanced budget multiplier.

In extreme economic circumstances, governments may intervene by introducing specific packages. For example, in 2012, the UK government introduced the Funding for Lending Scheme (FLS) to assist banks with lending to small and medium-sized companies; and in 2020, the Self-Employment Income Support Scheme (SEISS) to support businesses and the self-employed during the pandemic.

However, government spending or tax reduction may create inflationary pressures. Higher domestic prices make imports relatively cheaper and exports less competitive in foreign markets, so fiscal policy has possible implications for the balance of payments (see section 7.6). Inflation also tends to create more unemployment.

That said, fiscal policy can also be used in an attempt to reduce unemployment and stimulate employment. For example:

- more government spending on capital projects, on which people are employed to work
- government-funded training schemes, and
- taxation of companies on the basis of the numbers and pay levels of employees.

The impact of changes in fiscal policy is not always certain, and fiscal policy to pursue one aim (eg, lower inflation) may create barriers to the pursuit of other aims (eg, employment) for a while. In addition, the effects of fiscal changes can take a very long time to feed through into the economy, by which time other factors may have changed, complicating the overall outcome. Fiscal policy must, therefore, be used with care.

Government planners also need to consider how fiscal policy can affect savers, investors and companies:

- The tax regime, for example, affects different savings instruments and/or property ownership, and this affects investors' decisions.
- Companies will be affected by tax rules on dividends and profits, and tax breaks for certain activities. They may take these rules into account when deciding on dividend policy, or on whether to raise finance through debt (loans) or equities (by issuing shares) and other activities.

One feature of fiscal policy is that a government must plan what it wants to spend, and so how much it needs to raise, either in income (through taxation) or by borrowing. This helps to establish how much taxation there should be, what form the taxes should take and which sectors of the economy (firms or households, high-income earners or low-income earners) the money should come from. This formal planning of fiscal policy usually follows an annual cycle. In the UK, for example, the most important statement of changes to policy is the Budget, which takes place in the spring of each year. The Chancellor of the Exchequer also delivers a pre-Budget report each autumn, which formally makes the government's spending plans available for scrutiny.

Due to the annual planning cycle of government finances, and because there is usually a considerable time lag before businesses and people act upon changes brought about through tax and government spending, fiscal policy is not very responsive to shorter-term developments in the economy. For shorter-term fine tuning of the economy, monetary policy is more effective.

7.3 Monetary Policy

Monetary policy is concerned with changes in the amount of money in circulation (the money supply) and with changes in the price of money (interest rates). Central banks are charged with taking steps to keep inflation within a specified range, and these variables are linked with inflation in prices generally (as well as with exchange rates). How the supply or stock of money in an economy affects inflation and other economic variables is covered in section 7.5. Inflation measures the general rise in prices in an economy.

The interest level set by a nation's central bank has a significant impact on that nation's economy as a whole and it also influences exchange rates, inflation, market-rates, asset prices and the expectations and confidence of the overall market.

A central bank does not have an unlimited ability to have interest rates set how it wishes. It must consider what rates the overall market will bear so that the benchmark rate it chooses can be maintained.

We will now look at how different countries maintain monetary policy.

7.3.1 The UK

In the UK, monetary policies are the responsibility of the Monetary Policy Committee (MPC) of the **Bank of England (BoE)**.The BoE defines monetary policy as:

> *'the process by which the BoE sets the interest rate – and sometimes carries out other measures – in order to reach a target rate of inflation'.*

As well as the base rate, it uses less conventional tools, such as quantitative easing (QE), to meet this target. Subject to the inflation target, the monetary policy objective is to support the government's economic objectives, including those for growth and employment.

The BoE was given formal responsibility for this by the UK Treasury in the Bank of England Act 1998. It now has operational independence to manage monetary policy, previously within the domain of the Chancellor of the Exchequer, but within a band of 1% either side of an inflation rate target which is still set by the Chancellor in a formal annual remit. This target is 2% as measured by CPI. Although this is set as a forward-looking and medium-term (undefined) target, the Governor of the BoE must send an open letter of explanation to the Chancellor if the CPI breaches either side of the target band.

The Monetary Policy Committee

The MPC comprises nine independent members (the Governor of the BoE, three Deputy Governors for Monetary Policy, Financial Stability and Markets and Banking, the Chief Economist and external members appointed by the Chancellor), each of whom has expertise in the field of economics and monetary policy. The appointment of external members is designed to ensure that the MPC benefits from thinking and expertise in addition to that gained inside the BoE. Members serve fixed terms, after which they may be replaced or reappointed. The MPC meets eight times a year; at these meetings, each member of the committee has a vote (on the basis of one person, one vote) to set interest rates at the level they believe is consistent with meeting the inflation target.

In addition to monthly MPC minutes, the BoE publishes its Inflation Report every quarter. This report gives an analysis of the UK economy and the factors influencing policy decisions. It also includes the MPC's latest forecasts for inflation and output growth. Because monetary policy operates with a time-lag of about two years, it is necessary for the MPC to form judgements about the outlook for output and inflation.

The Bank of England

The BoE's framework for its operations in the sterling money markets is designed to implement the MPC's interest rate decisions while meeting the liquidity needs and so contributing to the stability of the banking system as a whole.

The BoE is the sole issuer of sterling central bank money, the final risk-free settlement asset in the UK. This enables the BoE to implement monetary policy and makes the framework for the bank's monetary operations central to liquidity management in the banking system as a whole and by individual banks and building societies.

The BoE's market operations have two objectives, stemming from its monetary policy and financial stability responsibilities as the UK's central bank. They are to:

- Implement monetary policy by maintaining overnight market interest rates in line with the BoE's bank rate (also called the base rate), so there is a flat risk-free money market yield curve to the next MPC decision date and very little day-to-day or intra-day volatility in market interest rates at maturities out to that horizon.
- Reduce the cost of disruption to the liquidity and payment services supplied by commercial banks. The BoE does this by balancing the provision of liquidity insurance against the costs of creating incentives for banks to take greater risks and subject to the need to avoid taking risk on to its balance sheet.

The Bank of England has many tools at its disposal, including:

- **Sterling Monetary Framework (SMF)** – allows eligible firms to swap less liquid collateral for central bank reserves (ie, the most liquid asset in the economy), thus providing a 'liquidity upgrade'.
- **Non-interest-based facilities** – the alternative liquidity facility (ALF) is available to UK banks that are unable to participate in the SMF. It is designed to provide banks that cannot pay or receive interest (eg, Islamic financial institutions) with the ability to place funds at the BoE.
- **Gilt/corporate bond holdings** – as its name suggests, the asset purchase facility (APF) buys financial assets (eg, gilts) with the aim of improving liquidity in the credit markets. In 2022, in light of economic conditions, the MPC voted to begin unwinding the APF (eg, by allowing bonds to mature or by selling them back to the market).

7.3.2 The EU

It is important to remember that each jurisdiction, with its own independent currency maintains its own monetary policy. Therefore, within the EU, those 20 countries which are members of the eurozone have a collective monetary policy under the ECB in Frankfurt. They each retain their own national central bank, but their responsibilities are largely restricted to regulatory roles and to managing national reserves. The remaining seven non-eurozone EU members (ie, Sweden, Denmark and several from Eastern Europe) still have their currencies and, therefore, their own monetary policies.

Like the BoE, the ECB has operational independence, but it also enjoys political and legal independence. No EU institution or government can attempt to influence its decisions, yet it is accountable to the European Parliament. It is widely regarded as the most independent of the world's major central banks, in that it both sets and implements its own monetary policy. It has only one primary objective: to maintain price stability by keeping the HICP close to, but below, 2%. Note that, unlike the BoE, this target is asymmetric (ie, there is a ceiling, but no formal floor).

7.3.3 The US

In the US, the Fed is the central banking system responsible for implementing monetary policy, in pursuit of economic goals as instructed by Congress – namely maximum employment, stable prices, and moderate long-term interest rates.

The Fed is governed by the Federal Reserve Board (FRB), an independent non-governmental agency. The US President appoints the FRB's seven members (or governors) for a single 14-year term, during which time they operate independently.

The Fed's monetary policymaking body is the Federal Open Market Committee (FOMC), which is responsible for formulating policies designed to manage the nation's money supply. The FOMC consists of 12 members: the members of the FRB, the president of the Federal Reserve Bank of New York, and four of the remaining Reserve Bank presidents.

The Fed, therefore, combines both public and private elements, operating within the government, but maintaining relative independence to insulate it from political pressures in fulfilling its various roles. The Fed seeks to achieve inflation that averages 2% over time.

7.3.4 China

China's central bank, the People's Bank of China (PBOC, PBoC or PBC), has a dual mandate: to maintain currency stability, both internally (ie, prices) and externally (ie, the renminbi, or yuan, exchange rate), and to promote economic growth through the management of monetary policies. However, the monetary policy of the PBOC is complex and has been shifting over time.

The PBOC has several tools to control money supply and interest rates including open market operations (OMO), the reserve requirement ratio (RRR) and various types of loans to Chinese banks. Additionally, policymakers frequently add new tools or retire older ones to ensure the system is increasingly aligned with developed countries. All in all, this can make it difficult to assess any changes to China's monetary policy and to relate them to macroeconomic developments.

7.4 Fiscal Stance and Other Interventions

Macro-economic fiscal stance is usually assessed by looking at the scale of the public deficit (ie, the gap between the state income and expenditure). The term is used to describe whether fiscal policy is being used to actively expand demand and output in the economy (a reflationary or expansionary fiscal stance), or conversely to take demand out of the circular flow (a deflationary fiscal stance).

It is important to note that both monetary and fiscal policy cannot be seen in isolation – they are interconnected, and the indicators and factors for each are interrelated. Even though central banks usually have independence to set interest rate policies, the decisions are taken with full knowledge of the government's fiscal stance. (Economics is a vast subject, so candidates wishing to find out more about how monetary and fiscal policy are interconnected are encouraged to undertake their own further reading.)

Also importantly, it takes time for monetary and fiscal policy to affect the economy once they have been implemented (estimates suggest that it can take up to 18 months for policy decisions to take full effect). This response lag, also known as impact lag, can make policy decisions more difficult. Fiscal policy lags are typically longer than monetary policy lags – firstly, it can take years for a proposed tax change to become law and secondly, it takes time for spending, income and employment to respond to changes in policy.

When traditional fiscal and monetary combinations do not work very well, especially during extreme market shocks, then further interventions may be necessary.

During the global financial crisis, for example, several central banks rapidly cut interest rates to then historic lows – in the UK, for example, the BoE cut the base rate to 0.5% in the US to 0.25%, and in China to 5.3% (from about 7.5% prior to the crisis).

Despite this, commercial banks were reluctant to lend money , thus putting the recovery at risk. To address the credit freeze, central banks launched aggressive quantitative easing (QE) programmes, as a way of injecting cash into the banking system: the banks get cash in exchange for government bonds, helping them to build-up their liquidity. The hope was that banks would then lend to consumers and businesses, stimulating spending and economic growth.

The US was the first to use QE to unblock the banking sector and prevent a deeper recession, followed by other central banks worldwide including those in the UK, EU, Switzerland and Sweden (it is worth noting, though, that QE is not new – it was used by Japan when it faced deflation in 2001–06). Some, such as China's PBOC, did not undertake QE, but cut banks' reserve requirement ratios, which is the percentage of liquid assets that they had to retain.

In March 2020, in response to the COVID-19 pandemic, central banks worldwide took steps to ensure the stability of their respective financial systems. In the UK, the MPC continued its QE programme, and reduced interest rates to a new historic low of 0.1%; the US Fed also cut rates to near zero. The ECB, instead of cutting rates, supported bank lending and expanded its asset purchase programme. Other central banks similarly eased monetary policies.

7.4.1 Unwinding of Central Banks Balance Sheets

One question in response to the level of QE undertaken might be: where do central banks get the money to buy all these securities? The answer, to put it rather bluntly, is they just create it. There is not even a requirement for central banks to turn on the printing presses and actually increase the monetary base of notes in circulation; rather, they can just increase the size of the commercial banks' accounts at the central bank (or 'reserves').

When banks swap their long-dated securities for reserves, their balance sheets shrink while the central bank's expands. This reduced pressure on commercial banks enables them to lend more to their customers, increasing liquidity in the economy and boosting aggregate demand.

At its peak in December 2021, global central banks assets reached US$44.1 trillion, up from $15.1 trillion in 2009 (post the global financial crisis) and $30.5 trillion in 2019 (immediately before the pandemic)[19] .

Central banks now face the challenge of normalising their balance sheets through quantitative tightening (QT), also known as 'quantitative hardening' or 'balance sheet normalisation'. QT involves central banks selling securities or not reinvesting maturing ones. QT acts as a contractionary monetary policy (ie, the opposite of QE) by reducing the money supply and liquidity in the economy, in turn putting upward pressure on interest rates.

19 Statista, January 2025. Total assets of central banks worldwide from 2002 to 2023. Retrieved from https://www.statista.com/statistics/421201/assets-of-central-banks/ (Accessed: February 2025)

As we saw in chapter 1, modern governments run on budget deficits (section 2.2), and easily obtainable, cheap mortgage finance has boosted the residential property market (chapter 1, section 4.1.1). In a highly leveraged economy, the rising cost of credit could weaken demand, thus triggering an economic crisis on a global scale.

QT could also create a bearish investor sentiment, particularly in equities and riskier assets (which are particularly sensitive). There is also the risk of a crash in the bond markets, as pressure builds for yields to move higher in a rising interest rate environment, leading to lower prices.

7.5 The Money Supply and its Effects

Learning Objective

2.4.2 Understand how the money supply affects: inflation, deflation, disinflation; interest rates; exchange rates; relationship between money supply, inflation and employment

The term 'money supply' is used to describe the total amount of money circulating in an economy – and, as with many concepts in economics, there are different ways of measuring it. For example, economists often talk about narrow money and broad money.

- **Narrow money** describes the total sum of all financial assets (including cash) which meet a somewhat narrow definition of money; for example, they must be very liquid and available to finance current spending needs. A deposit which was fixed for a long period would not, therefore, meet this definition.
- **Broad money** describes the total sum of a wider range of assets, including some which are not as liquid as those falling within the definition of narrow money. It may include, for example, money held in savings accounts which are not instant access accounts.

Governments use the money supply as a tool to influence the economy. This is measured using monetary aggregates, which vary from country to country. In the UK, two main measures are used:

- **M0** – the narrowest definition, covering notes and coins in circulation outside the BoE, plus operational deposits at the BoE.
- **M4** – the broadest definition, which includes notes and coins in circulation with the public, plus sterling deposits held with UK banks and building societies by the private sector.

In contrast: the EU uses three categories: M1 (narrow money), M2 (intermediate money) and M3 (broad money). The US and China use two – M1 (narrow money) and M2 (broad money) – although their definitions may differ.

7.5.1 How Money Supply Affects Inflation, Deflation and Disinflation

Interest rates are the main and most effective tool that central banks have at their disposal for keeping inflation within a specified range, but the money supply is also a factor.

If money is regarded as being held mainly for transactional (spending) purposes, an excess means that more money is chasing the same amount of assets, therefore pushing up prices. Conversely, if there is less money in supply, there is less to be spent, so asset prices will fall correspondingly. This theory works better in some economic environments than in others.

Deflation describes a general fall in the level of prices, and disinflation is a reduction in the rate of inflation (ie, a slowing of price growth, not a fall in prices). Using the quantity theory of money, price growth can theoretically be slowed (disinflation) or even reversed (deflation) through changes to the money supply.

7.5.2 How Money Supply Affects Interest Rates

Money supply is also important to interest rates.

We can think of interest rates as the price of money. If a bank lends us money, the interest rate is the price we are willing to pay that bank for the use of its funds (and the price that the bank is willing to accept for having to forgo the opportunity to use that money elsewhere for potentially more profitable activities). Conversely, if we deposit money with a bank, the interest we earn is the price the bank is willing to pay us for holding onto our funds.

Monetary economic theory states that interest rates are largely determined by the demand and supply of loanable funds. That is, if the money supply increases without a corresponding increase in demand (eg, for investment purposes), this results in more available loanable funds available (eg, for savings). With more money available for savings, interest rates tend to decrease, since there is less competition for borrowing.

7.5.3 How Money Supply Affects Exchange Rates

Similarly to interest rates, as discussed in section 6.9 above, exchange rates can be seen as the value of one currency relative to another. When a country expands its money supply, the amount of its currency in circulation rises, leading to less demand for each unit and, consequently, a reduction in the currency's value relative to others. The reverse is also true. Therefore, when the money supply expands without a corresponding increase in demand for the currency (such as from higher exports or foreign investments), the currency tends to weaken. With more of the currency available, its value declines in relation to other currencies, reflecting the decrease in its scarcity.

7.5.4 The Relationship between Money Supply, Inflation and Employment

The monetarist explanation of inflation operates through the Fisher equation:

$$MV = PT$$

where:

M = the money supply
V = the velocity of circulation
P = the price level
T = the transactions or output

There is a direct relationship between the growth of the money supply and inflation as monetarists assume that V and T are fixed. The mechanisms by which excess money is translated into inflation are examined below. Individuals can also spend their excess money balances directly on goods and services. This has a direct impact on inflation by raising aggregate demand. The more inelastic the aggregate supply in the economy, the greater the impact on inflation.

The increase in demand for goods and services may cause a rise in imports. Although this leakage from the domestic economy reduces the money supply, it also increases the supply of currency on the foreign exchange market, thus applying downward pressure on the exchange rate. This may cause imported inflation.

If excess money balances are spent on goods and services, the increase in the demand for labour will cause a rise in money wages and unit labour costs, which may cause cost-push inflation.

Cost-push inflation occurs when there is a reduction in aggregate supply. This inflation is problematic, as it means that real national income will fall and prices will rise.

7.6 The Balance of Payments

Learning Objective

2.4.3 Understand the impact of budget surpluses and deficits on business and the economy

2.4.4 Understand the composition of the balance of payments, and the factors behind and benefits of international trade and capital flows: current account; imports; exports

The balance of payments in an economy measures the payments between that country and others. It is made up of the country's exports and imports of goods, services and of transfers of financial capital. It measures all the payments received, and money owed, from overseas parties, less all the payments made, and debts owed, to people overseas.

7.6.1 Current and Capital Accounts

The accounts used to measure the balance of payments in an economy are:

- **The current account** – referred to as the balance of trade, this account comprises a country's imports and exports of goods, services and capital, as well as income from investments, employee compensation and current transfers (eg, private gifts or government aid). A surplus occurs when overseas income (ie, exports) exceeds its overseas expenditure (ie, imports). The current account balance is often considered the most important component of the balance of trade, due to its impact on factors such as output and employment.

  Trade is divided into two blocks: visible trade, which includes goods; and invisible trade, which consists mainly of services.

- **The capital account** – this comprises financial transactions that do not affect income, production or savings (eg, a copyright). If and when this attracts income, then the resulting transaction would appear in the current account.
- **The financial account** – this comprises transactions for increases or decreases in international ownership of assets. This account has four components: foreign direct investment (or FDI), portfolio investment, other investment, and reserve account flows.

Balance of payment statistics are notoriously unreliable since they are based on a series of estimates. There will always be a number known as the 'balancing item' in the accounts, to correct any statistical errors and omissions in the accounts, and to make sure the accounts 'balance'.

If more currency flows into a country than is recorded in actual transactions, then the balancing item will be positive, and vice versa.

7.6.2 The Impact of Imbalances on Exchange Rates

The balance of payments is important as it affects exchange rates, and therefore the competitiveness of exports and imports.

A current account deficit means that a country's overseas expenditure exceeds its income. The significance depends on the deficit's size and how long it persists: short-term deficits can be financed using reserves or capital inflows, so may not be regarded as too serious; whereas long-term deficits require external borrowing, and excessive borrowing increases debt servicing costs.

One way to address a deficit is by allowing the currency to depreciate, thus making imports more expensive and exports cheaper, which can improve the current account balance. However, financing the deficit through foreign debt may raise concerns about economic stability, in turn prompting higher interest rates to attract investment. This could strengthen the currency, counteracting the intended effect of a lower exchange rate to fix the deficit.

Persistent surpluses and deficits on the balance of payments can create a considerable headache for a government and can impact on exchange rates, interest rates and consequently other activity in the economy.

7.7 Macro-Economic Influences on Asset Classes

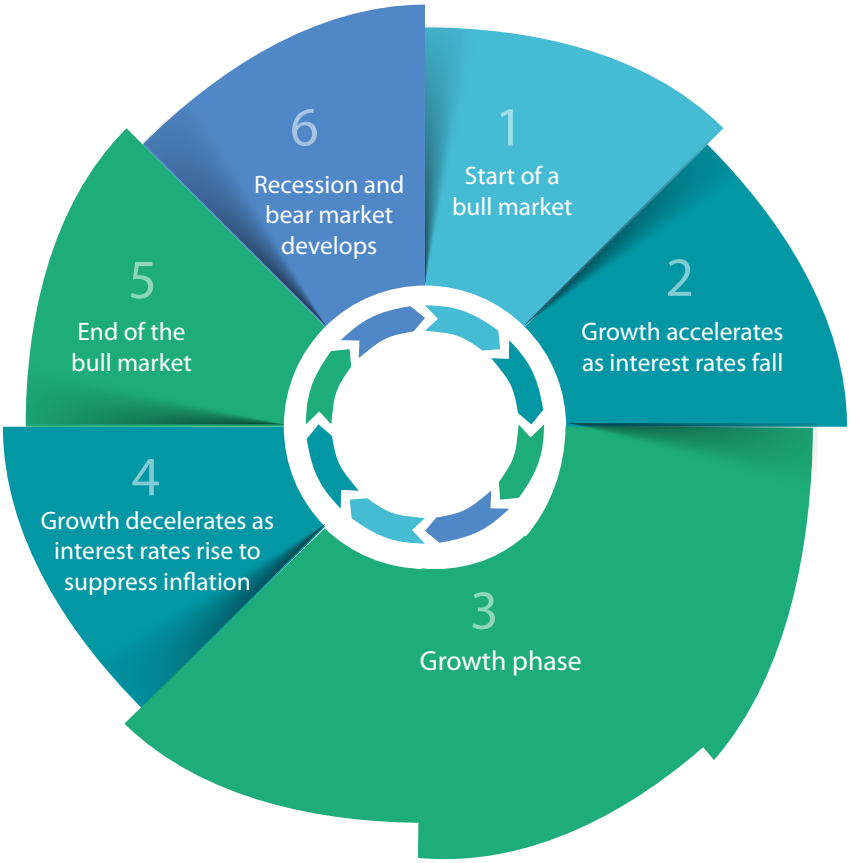
Learning Objective

2.5.2 Analyse the impact of macro-economic influences on each of the following asset classes: fixed income; commodities; cash; property; equities

In arriving at a suitable investment strategy, it is worth considering the impacts of the wider economy on the individual asset classes. Armed with this information, it is possible to position a portfolio to potentially benefit from changes in the macro-economy.

In addition to using a suitable asset allocation model to diversify the portfolio and reduce risk (by limiting exposure to any one sector or asset), investors need to assess the macro-economic indicators and the position of the economy in the economic cycle what deciding the individual investments within each asset class. As we will see in the following pages, each asset class may respond differently to changes in the broader economic landscape.

The investment clock below illustrates the interrelationship between the economic cycle and various sectors:



Sectors which may be in favour with investors at each point in the economic cycle include:

1. **Cyclical and growth assets that should thrive in favourable economic conditions, and momentum sectors**: High duration bonds; interest rate-sensitive equities (eg, banks, technology and 'growth' stocks).
2. **Geographies, assets and sectors that are sensitive to economic cycles**: High-yield bonds; cyclical stocks (eg, industrials, materials); emerging market equities.
3. **Assets with the potential for continued earnings growth**: Broad exposure to equities, including both domestic and international markets.
4. **Defensive assets that should outperform as interest rates start to stabilise or decline**: Short duration bonds; defensive stocks (eg, utilities, consumer staples, healthcare).
5. **Focus on quality and liquidity**: Government bonds and investment grade corporate bonds; defensive stocks; cash.
6. **Safe haven assets during times of economic uncertainty**: Government bonds (eg, US Treasuries); defensive dividend stocks; gold and precious metals.

However, the investment clock assumes that investors can pinpoint the exact position in the economic cycle and determine how each market sector is operationally geared to that cycle. Moreover, it does not account for unexpected events that may trigger shifts in investor risk appetite or alter the course of the economic cycle. Each economic cycle is unique, and investors' behaviour may differ from previous cycles.

7.7.1 Cash

The returns achieved on traditional cash deposits are influenced by regional and international macro-economic factors, such as inflation. Cash deposits, along with other money market instruments (such as T-bills and commercial paper), typically have maturities of less than 12 months. These products provide investors with liquid investments that meet short-term needs.

In addition to broader economic factors, the returns on these investments are also influenced by the issuer's industry and firm-specific factors. The nominal return on cash consists of the real rate of return plus the inflation rate. Inflation erodes capital values, and if the real interest rate is lower than inflation, then the value of the cash investment will diminish over time. While central banks may raise interest rates to control inflation, investors in time deposits must wait until maturity to benefit from any changes in rates.

Post COVID-19, in response to rising inflation, central banks worldwide have been raising interest rates – in some cases to multi-decade highs[20] – after holding them at persistently low levels following the global financial crisis. Despite these hikes, interest rates on cash deposits have generally lagged behind, hence diminishing their purchasing power. As inflation returns to official target levels in several economies, central banks are now cutting rates again, therefore further reducing the return on cash deposits.

20 World Economic Forum, July 2022. Interest rate hikes vs inflation: How are different countries doing it? Retrieved from https://www.weforum.org/stories/2022/07/interest-rate-hikes-inflation-rate-economy/ (Accessed: February 2025)

7.7.2 Fixed-Income Securities

Any changes to interest rates due to macro-economic influences also affect the value of fixed-income securities (eg, bonds).

Recall from chapter 1, section 2.8 that gross redemption yield (GRY) is used to identify the dynamic annualised return or rate that is provided to the investor for the entire period of the loan. Also, from section 2.8.4 of chapter 1, how there is an inverse relationship between the level of yield and the price of a bond. A bond's yield is not static, but reacts instantaneously to fresh news as underlying factors or drivers start to influence market expectations. Typically, bond investments lose value when the whole interest rate cycle turns upward, and vice versa.

Let's demonstrate how this works with an example. At the peak of the growth phase, inflationary pressures are likely to be increasing at an unacceptably high rate, prompting central backs to raise interest rates. This increase is necessary to control and moderate near- or long-term inflationary excesses in the economy. The rise in short-term rates can then be transmitted across the entire yield curve, affecting bonds of longer maturities. This, in turn, diminishes the value of existing fixed-interest holdings within the portfolio. Conversely, as the economy enters recession, central banks may lower interest rates to stimulate economy activity and encourage consumption; and as money market interest rates and bond yields fall, the prices and value of fixed-interest assets increase.

In the case of corporate bonds, credit spreads must also be considered. If the market believes that a company has become less creditworthy, it will widen the credit spread applied to that company's debt, causing the price to fall, even if there has been no change in interest rates. Conversely, if the company is seen as more creditworthy (eg, from investment grade to high yield), the credit spread narrows, causing the price to rise.

7.7.3 Equities

As an asset class, share prices are affected by both macro-economic and company-specific factors. The price of a share is directly influenced by economic considerations. News that boosts company prospects, stimulate sales, and lower costs of production and distribution can drive up share prices, which also raise expectations of higher dividends. Positive economic growth, particularly when accompanied by rising business activity, often leads to increased investor confidence and demand for equities. In the long run, share prices benefit from a steadily growing economy, with rising output, where corporate earnings grow.

Share prices can be sharply influenced by changes in sentiment which can happen quickly – for example, if an economic indicator is significantly different from what was expected, or there is a new expectation of an economic recovery. Optimism is often self-fulfilling, as investors expect better prospects for companies, leading to higher profits, and therefore, rising share prices and dividends. Investors will be prepared to pay a premium for those shares, thus driving the expected rise in prices. Similarly, pessimism can be similarly self-fulfilling, but in the opposite direction. Investor fear is often reflected in the VIX (Volatility Index), sometimes referred to as the 'fear gauge', which tends to spike during periods of market uncertainty or anticipated downturns.

A situation of persistently rising share prices is called a **bull market**. If expectations about economic recovery are dented (eg, due to rising unemployment), share prices may drop back again. In a booming economy, higher interest rates or concerns that it may be ending can reverse the direction of share prices; a persistent downward trend in prices is called a **bear market**.

Equities are generally seen as moderately good hedges against inflation – in this context, 'moderately' means that while equities may offer some protection against inflation over the long term, they do not provide a perfect hedge, especially during periods of sudden or high inflation. However, the effectiveness of this hedge will depend on the industry/sector in which the company operates. For example, industries with strong pricing power (eg, technology, which often operate in dynamic markets with high barriers to entry) are better able to pass on increased costs to consumers, so tend to provide the greatest inflation protection. In contrast, industries facing intense competition (eg, retail) may struggle to pass on these costs during inflationary periods.

7.7.4 Property

As with other common financial asset classes (cash, equities and bonds), the intrinsic value of real estate is affected not only by the key macro-economic factors (eg, GDP growth, inflation, interest rates and employment), but also by asset-specific factors including rental yields, capital appreciation, land availability, bank lending policies, and taxation benefits and subsidies.

For example, as discussed in section 7.7.1 of this chapter, rising interest rates have been implemented in recent years to combat high inflation, following about 15 years of record-low borrowing rates. Notably, in many countries, mortgage rates are linked to the relevant 10-year government bond yields (eg, gilts in the UK, and Treasury yields in the US); hence, as interest rates rose, so too did government bond yields, since investors demanded higher returns to compensate for the greater risk of lending compared to saving in a bank account. This, in turn, led to higher mortgage rates. When mortgage rates rise too much, potential buyers are unable to secure loans, leading to decreased demand for property.

The retail property market is more sensitive to employment conditions and the general health of household finances, while the commercial and agricultural property markets are also influenced by global market factors. Additionally, most reputable developers prefer the leasing model and then sell the leased property to investors; these can be attractive investment options, as they provide buyers with a return on investment from the very beginning.

7.7.5 Commodities

Commodities' intrinsic value is less affected by macro-economic conditions compared to other financial assets, and their low correlation with equities, bonds, property and cash enhances diversification. Further, their tangible nature makes them effective hedges against inflation.

A 2014 study[21] covering the period from 1950 to 2012 revealed a link between real interest rates (US three-month T-bill rate) and commodity prices, measured in US dollars using the Moody's Commodity Price Index. The results show a statistically significant relationship between the two, with an inverse relationship between commodity prices and the real interest rate: over periods when interest rates were

21 Effects of speculation and interest rates in a 'carry trade' model of commodity prices. *Journal of International Money and Finance*, 42, pp.88-112. https://doi.org/10.1016/j.jimonfin.2013.08.006

low, real commodity prices were higher. This is because rising interest rates generally make equities, bonds and other investments more attractive to investors, while non-interest-bearing assets (eg, commodities) become less attractive, and vice versa.

In practice, though, commodities encompass a wide range of products, each of which responds differently to macro-economic conditions. Hence, the factors influencing commodity prices and their relationship with real interest rates are far more complex, shaped by elements such as supply and demand, geopolitical tensions, currency fluctuations, global economic conditions, government policies and market speculation. Due to the diversity of commodities, this section focuses on metals (particularly gold) and energy, as the primary areas of interest among investors. Candidates who wish to explore a single commodity in more detail are advised to consult sources that are more closely related to their areas of interest.

Metals

Metals can be divided into two main categories:

- Base metals are more abundant and typically less valuable. These metals (eg, copper, aluminium/aluminium and zinc) are often used in industries such as construction, manufacturing and electronics due to their widespread availability and practical applications.
- Precious metals are rarer and typically have higher value – eg, gold, silver, platinum and palladium. They are prized for their scarcity, durability, and historical use as currency and stores of value. Precious metals are often seen as hedges against inflation and economic uncertainty due to their ability to retain value over time.

Gold bullion and physical silver have received significant attention in the press in recent years, largely due to heightened economic uncertainty, fluctuating market conditions and geopolitical instability. As investors seek safe haven assets during periods of uncertainty, the media closely follows the price movements of these precious metals, particularly when they reach new all-time highs or became central to discussions about wealth preservation strategies. Additionally, with growing trends in alternative investments, financial news outlets have frequently reported on the increasing popularity of precious metals as a way to diversify portfolios and hedge against risks associated with traditional financial markets.

To give an example, in February 2025, the gold price surged to a new all-time high of over US$2,900 a troy ounce[22]. Support has been provided by:

- **Interest rate cuts** – after months of aggressive hikes, central banks worldwide are shifting their monetary policies and cutting interest rates. This more accommodative stance has created a favourable environment for gold.
- **Tariffs and trade wars** – the announcement by US president Donald Trump to impose new tariffs on China, Mexico and Canada, as well as on imports of certain goods, has fuelled concerns over a potential trade war and inflation. As a result of the uncertainty surrounding global trade and the potential for inflation, investors flocked to safe haven assets.
- **Geopolitical instability** – (eg, the Israel-Hamas conflict, which began in 2023) has further boosted demand for gold as a reliable store of value.

22 BullionVault, 2025. Gold Price. Retrieved from https://www.bullionvault.com/gold-price-chart.do (Accessed: February 2025)

- **A likely weaker US dollar** – President Trump has also indicated that he wants a weaker dollar to 'Make America Great Again'. All else being equal, a weaker US dollar drives the gold price higher, as investors can now buy more gold (which is priced in US dollars) for their currency. Notably, though, both the US dollar and gold are safe haven trade plays, which can sometimes lead to them moving in tandem during times of geopolitical or financial uncertainty.

Gold and silver are more sensitive to changes in the foreign exchange rate of the US dollar (particularly for investors holding non-dollar currencies), while industrial metals have relatively weaker links. Additionally, gold and silver are influenced by actions taken by investment funds, as funds have incorporated these assets into their portfolios to mitigate the effects of increased market uncertainty and volatility.

Elsewhere, there are significant influences on metals prices based on expected demand from China and other emerging nations, especially the industrial metals such as aluminium/aluminum, copper and steel. Additionally, the global push for a green transition, including the shift towards renewable energy and electric vehicles, is expected to drive higher demand for these commodities, as they are essential for the production of clean energy infrastructure, batteries, and electric vehicle components.

Energy

Generally, crude oil, natural gas, coal and uranium fuel prices are strongly influenced by changes in demand, business cycles and supply/production constraints. As these commodities are essential to global energy production, their prices often respond to changes in both macro-economic conditions and specific industry developments. For example, during periods of economic growth, energy demand rises, which can push prices higher; whereas in times of economic downturn, demand typically declines, leading to price reductions. Similarly, supply disruptions caused by geopolitical tensions, natural disasters and production limitations can significantly impact the availability of these fuels, which further drives price volatility.

Geopolitical factors, particularly in the Middle East, significantly impact global energy markets. The Organization of the Petroleum Exporting Countries (OPEC) controls a substantial portion of the world's oil supply, so it plays a major role in regulating global oil production. With many of OPEC's member countries located in the Middle East, tensions or any uncertainty regarding the stability of countries in this region can have a profound effect on market sentiment, leading to concerns over potential supply disruptions and a direct impact on oil prices, including heightened volatility.

The anticipated future demand from two of the most important energy consuming economies (the US and China) are monitored closely by commodities traders. Both nations play a key role in setting trends for global energy markets. For the US, fossil fuels remain integral to its energy infrastructure, although it has seen a shift towards more sustainable energy in recent years; and in China's case, its rapid industrialisation and urbanisation have led to consistently rising energy needs, especially for coal and natural gas. As a result, commodities traders focus closely on economic indicators, government policies and energy consumption patterns in both of these countries to forecast potential price movements and plan for shifts in global energy demand.

8. Influences on Asset Classes

Learning Objective

2.5.1 Understand the role of financial investment in the economy: primary markets as introducers of new capital to business and government; secondary markets enabling investors to adjust investments to meet individual needs

8.1 Primary and Secondary Markets

8.1.1 Primary Markets

The term 'primary market' refers to the market where new securities, such are shares or debt instruments, are issued. Companies and governments need capital to fund their activities (eg, to buy premises or invest in machinery). To raise this capital, they may issue securities on the primary market.

Primary markets are important for both new ventures (ie, companies being established for the first time) and existing ventures (ie, companies expanding or raising new capital, or those introducing their existing shares to the public market for the first time).

For a new company listing its shares, stock exchanges act as the primary market, providing a platform for it to reach initial investors and raise capital. The process of introducing shares, bonds or loan stock on to the market for the first time is called 'listing'. Before securities can be listed, issuers must meet certain standards, which may include criteria such as:

- the size of the company
- the value of securities they are introducing
- the availability of information for potential investors to make informed decisions, and
- ongoing disclosure requirements about the company's activities or shares.

8.1.2 Secondary Markets

Once an investor has bought a holding in security in the primary market, they may need to sell or reduce it due to changes in their circumstances (eg, a shift in their investment objective or the need to access their money) or those of the company. Additionally, there may be opportunities to realise substantial capital gains on the investment.

The secondary market offers a mechanism for investors to sell or adjust their holdings, and to invest in other listed securities.

Stock exchanges act as a secondary market in securities. Thus, the secondary market is not capital raising, but allows for trading of existing issues.

Key Chapter Points

- The world population is increasing. The age structure in many economies, particularly in the developed world, is shifting towards a higher proportion of elderly people (although immigration is slowing this trend, to a degree).
- With more older people and young children, the proportion of the working population reduces. The non-working proportion, which is dependent on the working population, rises.
- Living standards rise when incomes increase by more than the rate of inflation, and vice versa.
- Productivity is a measure of how much output is produced by factors of production. Factors of production are land, labour, capital and enterprise. Increases in productivity, create economic wealth and enhance household incomes and therefore living standards.
- In the UK, the major factor behind the growth in the tertiary (service) sector of the economy has been the rapid expansion of the banking, finance and insurance sectors.
- A number of international factors influence the markets and the economy.
- Globalisation is an increasing factor, both in business and finance.
- Fiscal policy is the government's policy on taxation, borrowing and public (government) spending.
- Monetary policy is concerned with measures which affect the amount of money in the economy (the money stock or money supply) and the price of money (ie, rates of interest).
- A central bank acts for a government and typically has various functions, such as the issuance of banknotes, management of government finances, dealing in the money markets to set interest rates and acting as lender of last resort to the banking system.
- Economies go through cycles with identifiable phases and characteristics; governments try to stabilise the volatility of these cycles through various forms of intervention.
- New funds are made available to enterprises and to government on the primary market. Instruments are subsequently traded in secondary markets.
- Countries can suffer from trade imbalances when they import significantly more than they export, and vice versa.
- There are several measures which can be used to gauge the direction and strength of changes in the economy or a market.

End of Chapter Questions

Think of an answer for each question and refer to the appropriate workbook section for confirmation.

1. **What statements do a company's reports and accounts typically include?**
   Answer reference: Section 1.2

2. **What could a low price/earnings (P/E) ratio imply for the prospects of a share?**
   Answer reference: Sections 1.3.4

3. **How does a perfectly competitive market differ from a monopoly and oligopoly?**
   Answer reference: Sections 2.4.1 and 2.4.2

4. **Identify and explain the factors of production in the economy.**
   Answer reference: Section 3.4

5. **Describe the four stages that an economic cycle typically assumes?**
   Answer reference: Section 5.2

6. **What are procyclic and countercyclic indicators?**
   Answer reference: Section 6.10

7. **What is monetary policy concerned with and what is its main purpose?**
   Answer reference: Section 7.3

8. **What is the difference between deflation and disinflation?**
   Answer reference: Section 7.5.1

9. **Describe what is meant by a current account deficit.**
   Answer reference: Section 7.6.2

10. **How are share prices affected in both bull and bear markets?**
    Answer reference: Section 7.7.3

Chapter Three

Principles of Investment Risk and Return

1. **The Time Value of Money** 227
2. **Investment Risk and Return** 239
3. **Models of Investment Theory** 278

This syllabus area will provide approximately 9 of the 80 examination questions



1. The Time Value of Money

1.1 Compound Interest

Learning Objective

3.1.1 Understand the effects of compound interest and the time value of money

In finance, we often face decisions concerning the determination of how much we need to save today (present value or PV) for consumption in the future (future value or FV). Alternatively, we may need to find out what a future payment of money will be when it is converted to PV terms.

To carry out these tasks easily, we need to understand the mathematics behind time value problems. The time value of money is a concept that allows us to convert today's cash flow into an equivalent value at any point in the future (FV). Conversely, we can calculate the PV of a future cash flow by discounting it. Understanding the time value concept is an essential skill for any finance practitioner (see section 1.4 for further details on the time value of money).

The idea of compound interest and the effect it can have on an investment takes account of the additional growth that arises when an investor leaves their interest invested with the main deposit (the principal) instead of withdrawing it to spend: they begin to earn interest on that interest and their investment rolls up all the faster for it.

Example

Suppose that 20,000 yuan is invested at 10% interest which reflects the deposit rate for this saving.

	Yuan
Original investment	20,000
Interest in the first year (10%)	2,000
Investment at end of one year	22,000
Interest in the second year (10%)	2,200
Total investment at the end of two years	24,200

After one year, the original principal plus interest will amount to 22,000 yuan.

The second-year interest of 2,200 yuan is made up of 10% earned on the original investment, and 10% earned on the interest earned in the first year. The PV was 20,000 yuan. With interest rates steady over two years at 10%, this amount increases to generate an FV of 24,200 yuan at the end of year two. FV was obtained by discretely compounding the PV at a given interest rate over a series of intervals.

Instead of performing these calculations, we can easily calculate the FV using a standard formula:

$$FV = PV(1+r)^n$$

where:

PV = the present value (ie, the original sum invested)
r = the interest rate, or return rate, expressed as a decimal
n = the number of periods over which we are compounding
FV = the final value (ie, the sum invested after n periods)
$(1 + r)^n$ = the compounding factor

Compounding effects may appear to be minimal over one or two periods, but over a long time they can make a considerable difference to the growth of an investment.

In the previous example, interest has been calculated annually, but this is not always the case. Interest may be compounded discretely over smaller intervals of time: daily, weekly, monthly or quarterly or even continuously. In this case, the compounding factor is as follows:

$$\text{Compounding factor} = \left(1 + \frac{r}{j}\right)^{nj}$$

where j is the frequency or number of interest payments made in one year.

For example, if interest is paid quarterly (four times in one year), then j is 4. Similarly, if interest is paid daily, then j = 365 (or 366 in a leap year).

This compounding factor is then multiplied by the PV to determine the FV.

Note that when interest is being paid continuously, then the general formula of the compounding factor changes and is given as follows:

$$\text{Compounding factor} = e^{RT}$$

where:

R = the annual rate of interest paid (this is different from r used in the previous formula)
T = the total time period of investment in years
e = Napier's constant, a mathematical constant approximately equal to 2.71828

Continuous compounding is broadly the same as interest paid daily.

Example

An investor has $100 to invest over a four-year time period at an interest rate of 5% a year. Determine the future value of this investment if the annual interest is paid in the following manner: annually, semi-annually, quarterly, monthly, weekly, daily and continuously.

We use the following equation to determine the compounding factor for the discrete interest payments, and multiply the result by the $100 invested:

$$\text{CF based on discrete interest payments} = \left(1 + \frac{r}{j}\right)^{nj}$$

Finally, we use the following equation when interest is paid continuously over the year to determine the compounding factor, then we multiply the result by $100 of the original investment:

$$\text{CF based on continuous interest payments} = e^{RT}$$

	Notation used	Value
Amount invested today (£)	PV	100
Annual interest rate	Assume R is the same as r	5% or 0.05
Term of investment (years)	Assume T is the same as n	4

Payment of interest	Frequency of Interest payments in one year, j	Compounding factor (CF)	Future value of investment (FV)
Annual	1	1.2155	121.5506
Semi-annual	2	1.2184	121.8403
Quarterly	4	1.2199	121.9890
Monthly	12	1.2209	122.0895
Weekly	52	1.2213	122.1285
Daily	365	1.2214	122.1386
Continuously		1.2214	122.1403

The results of this exercise show that over the entire four-year investment period, the FV investment is sensitive to the frequency of interest payments in a year.

Generally, FV increases as the frequency of payments increases, ultimately reaching its maximum when the frequency of interest paid gets infinitely large (continuous).

This effect applies to any interest rate and any investment term, although the impact on FV is greater for higher annual interest rates (r) and/or longer investment periods (n).

If interest rate frequency is daily or continuous, it may be easier to use the equation that utilises the Napier constant, e:

$$FV = PV \times e^{RT}$$

In this example:

$$FV = 100 \times e^{(0.05 \times 5)} = 100 \times e^{0.2} = 100 \times 1.2214 = 122.1403$$

1.2 Present Value

Learning Objective

3.1.2 Calculate the present value of: lump sums; regular payments

The PV calculation is used to determine how much to invest today, given a known rate of interest and frequency of payment, in order to achieve a required amount in the future (FV). The methods used to calculate present value are known as discounted cash flow (DCF) techniques. The rate of interest that is to be received is known as the discount rate.

1.2.1 Present Value of a Future Lump Sum

The amount that needs to be invested today to obtain a targeted future sum is determined through discounting. The procedure is a reverse process to compounding. Thus, the future amount required by the rate of interest earned over the period is calculated by rearranging the formula for compound interest as follows:

$$PV = \frac{FV}{(1+r)^n}$$

Example

How much needs to be invested today at 5% a year to generate €121.55 after four years?

Solution

The formula is:

$$PV = €121.55 / (1+0.05)^4 = €121.55 / 1.2155 = €100$$

This can be checked in reverse by applying the compound interest formula:

$$€100 \times 1.05^4 = €121.55$$

As the PV formula expresses future sums in today's terms, it allows a comparison to be made of competing investments of equal risk, which have the same start date but different payment timings or amounts.

1.2.2 Present Value of an Annuity

The PV of an annuity represents the current worth of a series of equal payments received at regular intervals over a set period. It is calculated by discounting each future payment back to its value today, using a consistent discount rate. This same method applies to any stream of regular payments.

We will first consider where payments are made in arrears (called an 'ordinary annuity'). If we expect to receive payments of €100 over each of the next three years, we can calculate their PV assuming interest rates remain at 5%, using the formula above.

Year	Cash Flow	Discount Rate	Discount Factor	Present Value
1	100.00	5%	$100.00 / 1.05^1 = 0.9524$	95.24
2	100.00	5%	$100.00 / 1.05^2 = 0.9070$	90.70
3	100.00	5%	$100.00 / 1.05^3 = 0.8638$	86.38
Total				**272.32**

The PV of those future payments totalling €300.00 is actually €272.32. The table also shows how this converts into a discount factor by how much the FV is discounted in decimal terms.

Instead of calculating each PV, this can be calculated by using another formula:

$$\text{PV of an annuity} = CF \times \left({}^{1}\!/_{r} - {}^{1}\!/_{r(1+r)^{n}} \right)$$

where:

CF = the amount of the annuity paid each year
r = the rate of interest over the life of the annuity
n = the number of periods that the annuity will run for

Using the example above, the calculation is as follows:

$$\text{PV of an annuity} = 100 \times \left[\frac{1}{0.05} - \frac{1}{0.05 \times (1+0.05)^{3}} \right]$$

$$= 100 \times 2.7232 = €272.32$$

The PV of an annuity can be used for calculating items such as the monthly repayments on a mortgage, and it can also be used in investment appraisal.

For payments made in advance (also called an 'annuity due'), the above formula needs to be adjusted to account for the timing of the payments. This is done by multiplying the result for the annuity in arrears by (1 + r), since the first payment is made one period earlier than the payment in arrears, as follows:

$$\text{PV of an annuity} = CF \times \left({}^{1}\!/_{r} - {}^{1}\!/_{r(1+r)^{n}} \right) \times (1+r)$$

1.2.3 Present Value of Perpetuities

A perpetuity is a series of regular cash flows that are due to be paid or received indefinitely, which in practice is defined as a period beyond 50 years.

It is simply calculated using the following formula:

$$\text{PV of a perpetuity} = \frac{A}{r}$$

where:

A = the amount of periodic payment
r = the interest rate

Although a perpetuity really exists only as a mathematical model, it can be used to approximate the value of a long-term stream of equal payments by treating it as an indefinite perpetuity.

Example

An investor has commercial property that generates ¥100,000 of rental income and the interest rate is 8%. The property is expected to generate interest payments into perpetuity. Therefore, the PV of the rental income is calculated as follows:

$$\text{PV of a perpetuity} = \frac{¥100{,}000}{0.08} = ¥125{,}000$$

Perpetual Bond Calculations

As discussed in section 2.1.3 of chapter 1, a perpetual bond is a bond with no maturity date. Hence, it pays coupons indefinitely and the bond is not redeemed.

Perpetual bonds are priced using the following expression:

$$P = \frac{C}{Y}$$

where:

P = the price of the bond
C = the annual coupon rate
Y = the gross redemption yield (GRY) of the bond

Preference Share Calculations

Recall from section 3.2.2 of chapter 1 that preference shares are a mix between a bond and an ordinary share. As they pay a constant dividend indefinitely, they can be treated like a perpetual bond for the purposes of this calculation:

$$P = D / K$$

where:

D = the constant dividend set for the security
K = the return expected by the holder of the share

1.3 Future Value

Learning Objective

3.1.3 Calculate the future value of: lump sums; regular payments

1.3.1 Future Value of Lump Sums

Future value (FV) refers to the value at some point in the future of an amount invested now at a given rate of interest. We effectively already looked at the FV when we considered compounding interest in section 1.1, in which we saw that the FV of €100 deposited today at 5% a year (paid annually) for a period of four years was €121.55.

To calculate future value, use the following formula:

$$FV = PV \times (1 + r)^n$$

For our example, we would substitute the values to give:

$$FV = €100 \times 1.05^4 = €121.55$$

If interest is paid more frequently, the formula is adjusted. For example, if interest is instead paid half-yearly, it becomes:

$$FV = PV \times \left(1 + {}^{r}\!/_{2}\right)^{2n}$$

Hence:

$$FV = €100 \times \left(1 + {}^{0.05}/_{2}\right)^{2\times4} = €121.84$$

We calculate the rate of interest for the half-year first (ie, half of 5%, which is 2.5%) expressed as a decimal (ie, 0.025). Additionally, the term is converted into the number of periods on which interest will be paid over the four-year period (ie, eight half-yearly interest payments).

1.3.2 Applying Compound Interest to Regular Payments

So far, we have concentrated on establishing the FV of invested lump sums when compound interest is applied. We now move on to looking at how final values are established when a series of equal payments are invested either at the start or the end of each year. The former payments are known as being made in advance, while the latter are termed as being made in arrears.

If investing at the start of each year (annuity due), then the following formula is used:

$$FV = \text{Payment} \times \left[\frac{\left(1+r\right)^{n}-1}{r}\right] \times \left(1+r\right)$$

where:

r = the interest (or return) rate
n = the number of payment periods

Example

£100 is invested at the start of each year for five years at a fixed rate of interest of 6% pa compounded annually. What will the accumulated value of these series of payments be at the end of the five-year period?

Solution

$$FV = £100 \times \left[\left(1.06 - 1 \right) / 0.06 \right] \times 1.06 = £100 \times 5.6371 \times 1.06 = £597.53$$

We can check these figures using the following table.

Future Value					
Year	Deposit Paid	Balance at Start	Interest Rate	Interest Earned	Balance at End
1	100	£100.00	6%	£6.00	£106.00
2	100	£206.00	6%	£12.36	£218.36
3	100	£318.36	6%	£19.10	£337.46
4	100	£437.46	6%	£26.25	£463.71
5	100	£563.71	6%	£33.82	£597.53

If investing at the end of each year (ordinary annuity), then the following formula is used.

$$FV = \text{Payment} \times \left[\frac{\left(1 + r \right)^{n} - 1}{r} \right]$$

Example

£100 is invested at the end of each year for five years at a fixed rate of interest of 6% pa compounded annually. What will the accumulated value of these series of payments be at the end of the five-year period?

Solution

$$FV = £100 \times \left[\left(1.065 - 1 \right) / 0.06 \right] = £100 \times 5.6371 = £563.71$$

We can check these figures using the following table.

Future Value					
Year	Deposit Paid	Balance at Start	Interest Rate	Interest Earned	Balance at End
1	100	£0.00	6%	£0.00	£100.00
2	100	£100.00	6%	£6.00	£206.00
3	100	£206.00	6%	£12.36	£318.36
4	100	£318.36	6%	£19.10	£437.46
5	100	£437.46	6%	£26.25	£563.71

Note that the difference between this and the earlier example (of £33.82) is solely accounted for by one earlier payment being invested over the entire five-year period ie, £100 x (1.06^5 – 1) = £33.82.

1.4 The Time Value of Money

Both investors and advisers need to appreciate the implications of holding investments over a period of time, and the effect of inflation during the time period on returns from investments.

If a person has a choice between £1,000 now or £1,000 in one year's time, they will likely prefer the first option: if they have £1,000 now, they can invest it and earn interest, so they will have more at the year-end. They might, alternatively, have other uses for the money.

This demonstrates that money has a time value. Having money now is of more value than having money at a future date, because we can make it work for us from an earlier point. Interest can be seen partly as the return required by the lender to compensate for the time value of money that the lender is supplying to the borrower. Hence, the time value of money is used to calculate the amount needed now (ie, present value) to produce a future sum.

1.5 Inflation and Investment Returns

Learning Objective

3.1.4 Calculate real and inflation-adjusted returns: nominal returns; real or inflation-adjusted returns; total returns

The nominal return on an investment is the return it provides, unadjusted for inflation. For example, a bank account paying 4% interest annually has a nominal return of 4%.

The real return is the return that an investor receives after adjusting for the effects of inflation:

$$\text{Real return} = \text{Nominal return} - \text{Inflation rate}$$

Thus, if inflation is running at 3% a year, the above account is providing a real return of 1% (ie, 4%-3%).

This is useful for giving an approximation of the investment's real rate of return. However, if we need a more accurate measure of the real return, it becomes a bit more complicated. The actual relationship between the inflation rate, the real return and the nominal return is as follows, with rates expressed as a decimal (eg, 5% is expressed as 0.05):

$$\left(1+\text{Real rate of return}\right)\times\left(1+\text{Inflation rate}\right)=1+\text{Nominal return}$$

This formula can be rearranged to give the following:

$$\text{Real return}=\frac{1+\text{Nominal rate of return}}{1+\text{Inflation rate}}-1$$

Note that the terms '1 + Nominal return' and '1 + Inflation rate' (as in the brackets above) may be referred to as the return relative and the inflation relative, respectively.

Example

The nominal return on an investment is 6% a year and the annual rate of inflation is 4% a year. The real return is therefore:

$$\text{Real return } =\left(1+0.06\right)/\left(1+0.04\right)-1=1.019-1=0.019 \text{ or } 1.9\%$$

However, it is not unusual for people to use the approximate measure that we looked at first (ie, real return as the difference between the nominal rate of return and the rate of inflation), which would be 6% – 4% = 2% in our last example.

It is possible for a real return to be negative. In the example above, if the annual rate of inflation was instead 8% a year, then the real return would be around -2%. Put another way, the purchasing power of the deposit held in that bank account would be falling at 2% a year.

This is important, because investors need to keep the effects of inflation in mind when planning their financial affairs. Even quite low levels of inflation can erode the purchasing power of someone's wealth over time.

You may also see the term 'total return', which is the return on an investment from its income production and any capital gains (or losses) it generates. This may be important to an investor when comparing investments, but it may also be important to strip out the elements of that return into two elements: a return generated from the income portion and a second element from the capital gain (or loss). Individual elements of return may be treated differently for tax purposes.

2. Investment Risk and Return

Learning Objective

3.2.1 Analyse and explain the main types of risk and the implications for investors: systemic risk; systematic risk– asset price volatility, currency, interest rates, commodity price volatility; unsystematic risk – liquidity, gearing, counterparty risk; concentration and diversification – sector specific, country, emerging markets; market timing; ESG factor risk

2.1 Risk Premium

Risk and reward are important aspects of investment decisions. While low-risk investments generally generate lower returns, a common misconception is that taking on a high level of risk will always result in higher returns.

Risk arises when there is a possibility of poor performance. A risky investment can offer the *potential* for relatively high returns, but the flip side of that risk is the possibility of low or negative returns. In other words:

- **High-risk investments** generally have higher reward potential, plus a greater potential for loss.
- **Low-risk investments** generally have a lower reward, with a lower possibility of loss.

Thus, risk and potential reward are generally positively correlated: investors must take on a certain level of risk if they want to achieve any form of reward, and there is a trade-off between increasing levels of risk and the potential rewards. It is important for financial advisers and their clients to understand this connection between risk and return.

While risk cannot be avoided entirely, a short-dated investment-grade government bond is considered virtually risk-free in terms of default. These bonds are therefore used as a benchmark for the 'risk-free rate' of return. For example, if an investor holds a three-month UK gilt or US Treasury bond to maturity, they know exactly what return they will receive. However:

- The risk-free rate varies over time, just as interest rates do.
- Even governments can face payment difficulties and default on their payment obligations.
- Government bonds may be risk-free to one investor but risky to another, due to the potential for inflation to affect prices of securities trading on secondary markets.

Hence, there is no such thing as an irrevocable and absolute risk-free return.

The rates of return on other investments (such as shares, property and commodities) will differ from the risk-free rate, reflecting the additional return required by investors to compensate them for taking on additional risk. This additional return is the risk premium, also called the excess return.

The idea of risk premium is relevant in various contexts:

- An individual may find that such a premium is required from them. For example, when taking out a mortgage, if the individual's proposal carries higher-than-average risk (eg, they have a lower credit rating), they may have to pay a higher rate of interest.
- For companies seeking finance, the principle is the same. For example, loans to companies with relatively low credit ratings will generally carry higher rates of interest (carrying a risk premium relative to the interest rates that are available to companies with higher credit ratings).

For academics in finance, another key measure of the risk premium that is monitored over time is the equity risk premium. A key driver of future equity returns, this is used by corporate financiers to assess the costs of capital and predict future equity returns when raising funds for new projects.

Equity holders, in particular, face the risk of much lower returns, even below those on risk-free assets; the equity risk premium, therefore, compensates them for taking on that risk.

2.2 Types of Risk

Almost all investments carry a certain level of risk – including cash deposits (considered low risk), as we saw in chapter 1, section 1.4. A large element of this risk can be mitigated (ie, reduced) through appropriate diversification by spreading investments across a broad range of asset classes and, within this, a number of different sectors and markets. This is covered in more detail in section 2.2.4.

There are two main types of risk: systematic and **unsystematic risk**. There is also systemic risk, which we will not look at in detail.

2.2.1 Systemic Risk

Systemic risk must not be confused with **systematic risk** (covered in section 2.2.2, below) as it is used in capital markets theory.

In finance and economics, systemic risk is often discussed in connection with the risk of collapse of an entire financial system or entire market. It is often associated with interlinkages and interdependencies within a system or market, where the failure of a single entity or cluster of entities can trigger a cascading failure, potentially bankrupting or bringing down the entire system.

An example of systemic risk is the global financial crisis, which led to a run on the banks. In this scenario, one bank experiences financial difficulties, creating a cascading effect on other banks in the system to which the first bank owes money. This raises concerns about defaults and liquidity in the banking sector, leading panicked investors to withdraw money in a 'flight to safety'.

2.2.2 Systematic Risk

In capital markets theory, systematic risk affects the financial system as a whole. Also called market risk, undiversifiable risk or aggregate risk, systematic risk tends to occur as a result of macroeconomic factors, such as changes in interest/exchange rates, inflation, tax reforms and political instability.

As systematic risk is inherent in the aggregate market; it is likely to affect almost all investments. These risks are often beyond the control of most investors to predict, and difficult for portfolio managers to protect against. However, certain types of investments are more vulnerable to systematic risk than others.

Inflation Risk

Rising prices can reduce the purchasing power of capital or income. By investing in assets that may not keep up with inflation, an investor risks a loss in the purchasing power of their portfolio over the life of the investment. Even small amounts of inflation can have a cumulative effect over time.

High levels of inflation are often associated with high interest rates, and vice versa.

Interest Rate Risk

Interest rate risk is the risk that interest rates move against the investor. For example, they invest in:

- a fixed-rate asset with a 4% rate becomes less attractive when interest rates rise to, say, 8%, and
- a variable-rate bank deposit loses income if rates fall.

Interest rate risk can also affect an investor's capital, since the price of fixed-interest securities is inversely related to interest rates (ie, as rates rise, then prices fall, and vice versa).

Additionally, interest rates affect businesses and consumers, as higher rates make borrowing more expensive, (eg, to fund expansion of their activities or finance large purchases). If they have additional funds, they may find it more profitable to deposit them and earn higher interest, rather than using the funds to trade or spend. Hence, in a higher rate environment, businesses and consumers are likely to spend less and save more. For companies with high gearing, the regular interest payments on long-term debt take precedence over dividends to shareholders, and if earnings are volatile, the company may struggle to meet its debt obligations if those payments are tied to a higher rate.

Currency Risk

Currency risk arises from fluctuations in exchange rates. An investor in foreign stocks or bonds, as well as domestic securities with overseas revenues, faces currency risk. For companies, changes in the value of one currency against another can impact profits when converted to its home currency.

Example

A German investor buys shares in a US company which does most of its trading in the US:

- The share price in US dollars fluctuates on the US stock market; this is market risk.
- Additionally, the value of the euro fluctuates against the US dollar; this is currency risk.

The investment's value in euros will change due to both the dollar share price and the exchange rate.

Some companies hedge their currency risks by using tools such as forward currency contracts (a type of agreement that fixes the value of future currency inflows at the time of the transaction) to lock in exchange rates and reduce uncertainty. The term 'hedging' means undertaking transactions to protect against a certain event – in this case, an adverse currency movement.

A strong currency sounds good on the face of it, but it usually creates problems for exporters as goods become more expensive for overseas buyers. Conversely, a weak currency increases costs for companies that import raw materials from overseas.

Other Risks of International Assets

Alongside currency risk, investors in international assets should consider the following:

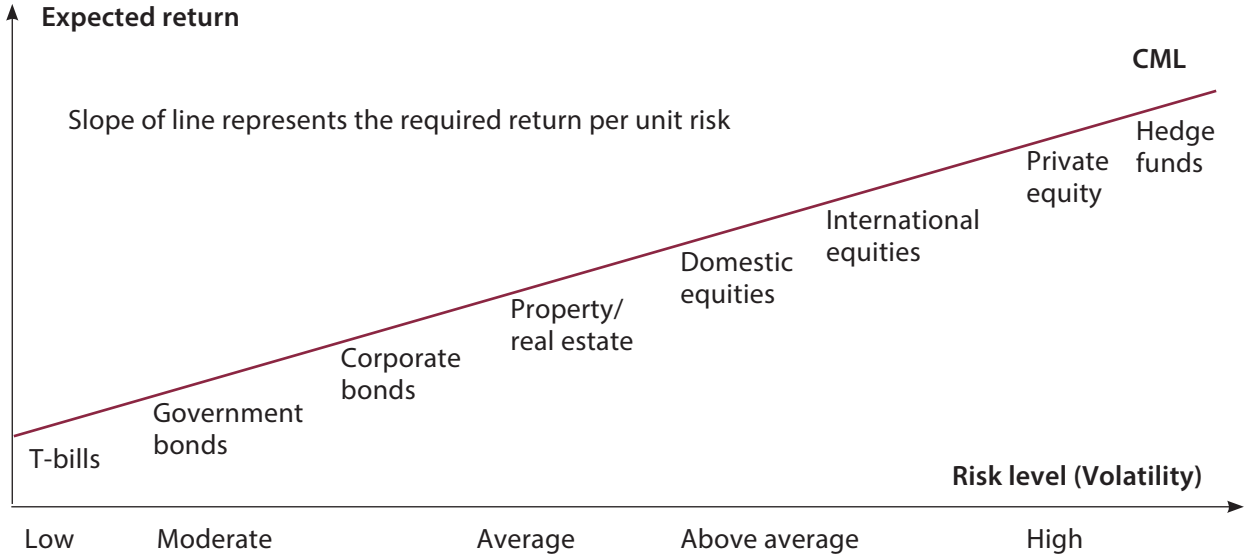
- **Political risk** – the risk that an investment's returns suffer due to political changes or instability (eg, a change in government).
- **Regulation risk** – the effect of a change in laws and regulations that could materially impact a business, sector or market (eg, making a business practice illegal, or changing the competitive landscape).
- **Overseas taxation** – there is a risk of countries using their tax administrative practices, either explicitly or implicitly, to discourage foreign direct investment (FDI). The cost of overseas taxation may be mitigated by double taxation agreements (DTAs); should such an agreement be in place and depending on the agreement, full or partial relief may be given.
- **Stress-induced correlation increase** – investors should be aware that, during episodes of market stress, correlations across international markets tend to increase, thus limiting opportunities for diversification.
- **Emerging markets concerns** – issues include political instability, limitations on ownership of securities by international investors, the quality and content of information available on foreign securities and non-normality of security returns.

Asset Price Volatility

Volatility refers to the speed and extent of price fluctuations, either up or down. More specifically, it is a measure of dispersion around the mean, or average, return of an asset – (see section 2.4.1). Thus, asset price volatility is the uncertainty (ie, risk) about the expected future returns from an asset.

Price volatility is usually caused by economic or policy factors such as inflation and interest rates, central bank monetary policies, and changes in other markets. While volatility is unavoidable and can present significant investment risk, it is not necessarily undesirable. As volatility increases, so does the potential for an investor to earn higher returns. The trade-off is that higher volatility means higher risk.

On average, over the long term, equities have demonstrated higher price volatility than bonds. This is because bonds offer steady interest payments, the return of principal, and certain protections and guarantees, which equities do not.



Note that price risk can be either systematic or unsystematic. In a global economic crisis, price risk is systematic because multiple asset classes are affected; otherwise, the most common and effective tool to mitigate price risk is diversification, which is covered in section 2.2.4.

Commodity Price Volatility

Similar to asset price volatility, commodity price volatility refers to fluctuations in market prices due to changes in the price of a commodity. However, commodity price volatility is primarily influenced by politics, seasonal changes, technology and current market conditions, all of which can impact supply and demand.

For example, an oversupply of crude oil can lead to a fall in price. A company heavily invested in oil drilling will experience a fall in its profit margins, since it is still operating at the same cost but its profits will decrease with the lower oil price. Thus, the company faces commodity price risk.

Commodities can be even more volatile than equities. Companies can minimise this uncertainty by using futures or options to hedge their risk.

2.2.3 Unsystematic Risk

Unsystematic risk relates to a particular business, investment or share, so it can usually be reduced through diversification. For this reason, it is also known as non-systematic, specific, diversifiable or unique risk.

Examples of unsystematic risk include:

- **Business risks** – risks associated with the nature of a company's profits and dividends. They include factors such as product design, labour relations and the costs of raw materials.
- **Industry risks** – risks that can impact a particular industry and, in turn, companies within that industry. Examples include tariffs, industry-wide strikes and changes in consumer taste.
- **Management risks** – risks that relate to the calibre of management of a company. For example, are the managers good enough to plan and manage the company effectively, or are they out of their depth and unable to cope with challenges?
- **Financial risks** – risks associated to a firm's financing choices. A full equity-financed firm has no financial risk, while incorporating debt increases its financial obligations (to repay the coupons and principal), thus exposing shareholders to greater risk. This is known as gearing risk.

Liquidity Risk

As we saw in section 2.9.3 in chapter 1, liquidity risk refers to how easily an investment can be converted into cash. Certain types of investment or market are illiquid, meaning they are difficult to sell quickly for a fair price.

Counterparty Risk

Counterparty risk (also called credit risk or default risk) is the risk that a counterparty in a transaction cannot honour its financial obligations.

For example, an investor in a corporate bond expects to receive coupon payments and the bond's nominal value at maturity, but they are exposed to the risk that the issuer cannot make these payments on time. Similarly, buying an equity **put option** on the over-the-counter (OTC) market introduces counterparty risk if the option's value increases sharply during market declines. Similar risk exists in swaps, swaptions, and inflation-linked swaps.

2.2.4 Concentration and Diversification

A portfolio is said to be concentrated if it is invested in relatively few asset classes, countries/regions, sectors or securities. Investors may select a concentrated portfolio when they are optimistic about a particular area of the market, so are seeking to increase their potential gains. At the same time, such a strategy increases concentration risk – that is, the potential for loss in value if that allocation moves in an unfavourable direction.

The opposite investment strategy to concentration is diversification, which can be thought of as 'not having all your eggs in one basket'. It involves spreading investments across various asset classes (eg, cash, bonds, equities and property), and further diversification can be achieved by spreading the exposure in a particular asset class. This approach is the starting point for most portfolio managers, and can be implemented in several ways, as we will now consider. All in all, diversification helps to reduce the risk of a downturn in any one area.

Sectors

According to modern portfolio theory (MPT, covered in section 3.2), a portfolio is well diversified if it holds roughly equal amounts in 15–20 different holdings across various different industries/sectors, among other considerations. Very large portfolios (such as those operated by pension funds) often hold hundreds or even thousands of securities with different risk factors.

One way to achieve diversification is to invest in sector funds. As the name implies, a sector fund is a collective investment scheme (CIS) that focuses on a specific sector of the economy. These funds come in many different flavours and can vary substantially in market capitalisation, investment objective (eg, growth and/or income) and the types of securities within the fund.

Examples include:

- **Natural resources funds** – invest in oil, gas and other energy sources, as well as timber and forestry. In recent years, some funds have incorporated renewable energy companies, driven by the growing importance of sustainable investing and renewable energy.
- **Healthcare funds** – invest in for-profit medical institutions, such as pharmaceutical companies. Many of these funds also focus on biotechnology and innovative companies within the sector.
- **Technology funds** – focus on companies involved in computers, electronics, cyber security and other technology sectors, including those benefiting from technological advances.
- **Infrastructure funds** – invest in essential public assets such as roads, airports, rail networks, schools, prisons, hospitals and renewable energy. These funds are typically characterised by low levels of competition and high barriers to entry, making them attractive to investors seeking predictable long-term returns that rise in line with inflation.

Geographical Areas/Markets

Just as it increases risk to be exposed to any one company or industry/sector, so it may be risky to be exposed only to one market. For example, a stock market as a whole may suffer if there is an announcement of poor economic figures (the types of factors that can affect the market were examined in chapter 2). Further, each country and region has its own unique set of investment opportunities based on their stage of economic development, demographics and resources, among other factors.

While world markets are more closely correlated in their performance than in the past, they do not usually move in tandem for long periods. One country's economy may be booming while another is struggling, and their markets will reflect these differences. Thus, an investor with sufficient assets may choose to diversify their exposure by holding investments in both their home market and some in major (and potentially emerging) markets worldwide.

Emerging markets (as discussed in chapter 2, section 3.7) offer unique opportunities for diversification. While these markets can be higher risk when held in isolation due to factors such as political instability, currency fluctuations and less developed financial systems, including them in a globally diversified portfolio can actually reduce overall portfolio risk. This is because emerging markets often have economic cycles that do not directly align with those of developed markets, so as one market faces a downturn then the other may be experiencing growth.

Currencies

This may be particularly useful if the investor is based overseas, if converted back into their home currency, to eliminate or reduce the impact of exchange rate risk.

Company Size

This type of diversification is specific to equities. Generally, larger companies tend to be less volatile and reward investors with stable and growing dividend streams, while returns from medium-sized and smaller companies are more closely tied to the fortunes of the domestic economy.

In periods of low or no economic growth, large companies tend to be resilient on the basis that they have diversified revenue streams, a more stable customer base and a more predictable supply chain. In contrast, during such periods, smaller companies tend to grow at a slower pace (if at all); and for companies that are not generating significant profits, this can present significant challenges. Over time, though, smaller companies tend to outperform larger ones, as smaller companies are typically more nimble and able to grow much faster than their larger peers.

What is considered to be a 'large cap' differs depending on the country in question. For example, in the US, a large cap is considered to be a company with a market capitalisation (ie, the monetary value of its outstanding shares) of over $10 billion. In contrast, a large cap in the UK is typically defined as a company worth over £1 billion.

Some organisations also have their own definitions of what constitutes a large- and small-cap company. For example, Morningstar defines large caps as those in the top 5% of capitalisation within the domestic market; small caps are those in the bottom 80%; and mid-caps in between[1].

Investment Style

This type of diversification is again specific to equities – see chapter 1, section 3.8.1 for more information on different investing styles. Different investment styles can add diversity to a portfolio when combined, as they tend to perform at different times. For example, growth stocks tend to outperform when interest rates are falling (ie, the yield curve is flat or downward sloping), whereas value outperforms growth when interest rates are rising (ie, when the yield curve is upward sloping).

Credit Quality

This type of diversification is specific to bonds.

Investment grade bonds tend to be less risky than high-yield bonds and usually deliver a lower return over the long term. Conversely, high-yield bonds typically offer higher returns, albeit with more risk, as the issuers are deemed to have a greater chance of default.

1 Morningstar, 2025. Glossary: Small cap. Retrieved from https://www.morningstar.co.uk/uk/glossary/98308/small-cap.aspx (Accessed: February 2025)

Maturities

This type of diversification is also specific to bonds.

Laddering a portfolio (ie, staggering the maturity dates) across short-, intermediate- and long-dated issues means that an investor can take advantage of potentially higher interest rates by allowing them to reinvest matured bonds at a higher rate of interest. For this reason, short-dated issues are less sensitive to change in interest rates, and long-dated issues more so.

Duration

As we saw in chapter 1, section 2.8.4, duration encapsulates the combined impact of the coupon and maturity effect on the price sensitivity of a bond – the longer the duration, the more sensitive the bond's price is to interest rate movements (or expectations thereof). Diversifying the bond element of a portfolio in terms of duration can therefore reduce interest rate risk.

2.2.5 Market Timing and Timescale

Timing and timescale are also important factors in investing. Ideally, an investor would enter the stock market just as it begins to rise and exit just before it falls. However, market timing is extremely difficult to predict, and sudden events can trigger stock market falls. Hence, there is a common saying in the investment world:

> *'It's about time in the markets, not timing the markets'.*

While shares generally deliver better long-term returns than less risky asset classes, they can also experience significant short-term volatility. Therefore, a logical investor will accept the inherent market fluctuations and be prepared to invest for the long term, riding out the ups and downs.

Nonetheless, there are times when waiting to invest can pay off, so it may be prudent to keep some cash available (ie, liquidity) and invest when opportunities arise.

2.2.6 ESG Factor Risk

Conventionally, investors select a range of investments with the goal of maximising total returns within their risk tolerance levels. With environmental, social and corporate governance (ESG), investors focus on companies that are addressing, or developing ways to address, at least one of these three key dimensions of sustainable investing. This captures the idea that investments should be made into companies with sustainable business practices capable of being continued indefinitely, without causing significant harm to current or future generations or exhausting natural resources, and on the expectation that they have higher investment potential over the long term. See chapter 1, section 2.7 on the three pillars of ESG investing.

2.3 Statistical Analysis

Learning Objective

3.4.1 Understand data sampling and regression analysis: sources of data – primary and secondary, sampling, continuous and discrete, categorical data, frequency and relative frequency distribution, presentation methods; summary data and linear regression – averages, arithmetic and geometric mean, mode and median, methods of dispersion; correlation and linear regression

2.3.1 Primary and Secondary Data

The data that is collected can be categorised into two main types:

- **Primary data** is information or material specifically collected for a particular purpose, and the conditions under which it was collected and any limitations will be known.
- **Secondary data** is collected by government agencies and other international bodies, and then distributed in a convenient form. This data typically requires further analysis if each user is to maximise the value of the information contained within it.

Numerical data can be categorised into that which is continuous (where numbers in a data series can assume any value) or discrete (where the numbers in the data series are restricted to specific values, such as whole numbers). Discrete data can be further classified into numerical (eg, the number of people in a household, or the count of transactions within a given period) or categorical (where data is grouped into specific categories, such as the types of fruit in a basket or different sectors in an investment portfolio).

2.3.2 Populations and Samples

When dealing with data, you must be able to distinguish whether the information relates to an entire population or a sample of a population.

If a population is being considered, every member or constituent of a particular group will be included in the analysis – eg, all constituents of the S&P 500, of the DAX 40, or of the SSE Shanghai Composite Index.

In contrast, a sample only contains a subset of the population; for example, a selection of company shares from the index. The larger the sample is, the more representative it will be of the population. Often, populations become so large and cumbersome that using and making inferences from samples is the only viable and cost-effective means of analysing the population.

Samples can be either:

- **Random** – the sample is selected randomly, such that each constituent has an equal chance or probability of being included. This is typically done by using a table of random numbers to ensure that the selection is free from bias.
- **Non-random** – in this approach, a non-random method is used to select the sample. The goal is to select a sample that it is considered to be more representative, although the selection process may introduce some bias.

2.3.3 Presentation Methods

Raw numerical data can be presented in a wide variety of tabulated and graphical formats to enhance its informational value and ease of interpretation.

Tabulated numerical data often takes the form of a frequency distribution table. A frequency distribution table involves categorising the number of times that something has occurred in each category of investigation. The results are arranged in order of their size and value, and may be grouped into subsets so that the information can be displayed more meaningfully.

For example, you could analyse the age range of the people working in your firm as shown below.

Age Range	Number of People
50 to 60	15
40 to 50	22
30 to 40	26
25 to 30	12
20 to 25	13
Under 20	12
Total	**100**

As a result of grouping the data, it is possible to detect patterns in the data such as how many people are employed in different age ranges. The width of the band (or interval) used will necessarily impact on the usefulness of the data and should, therefore, be chosen carefully.

By adding the number of times that something has occurred, it is possible to create a cumulative frequency distribution table. It looks almost the same as a frequency distribution table, but has added columns that give the cumulative frequency and the cumulative percentage of the results.

Age Range	No. of People	Cumulative Frequency	Cumulative Percentage
50 to 60	15	15	15%
40 to 50	22	37	37%
30 to 40	26	63	63%
25 to 30	12	75	75%
20 to 25	13	88	88%
Under 20	12	100	100%
Total	**100**		

Knowing how to convey information graphically is important in the presentation of statistics, as is knowing what type of graph to use. Examples include the following:

- **Bar charts** – display information as bars or columns representing each class of data according to their frequency of occurrence. They are useful for comparing items and relationships or frequency distribution.
- **Pie charts** – a circle divided into different slices, each representing a different set of data. They are useful for describing the component parts of the data being presented.
- **Histograms** – look similar to bar graphs, but it is the area and not the height of the bar that represents the frequency of occurrence. They are often used to illustrate the major features of the distribution of data in a convenient form.
- **Time series graphs** – display data over time, such as a share price.
- **Scattergrams** – used to determine whether there is a relationship between two variables, and to illustrate a correlation or pattern between different assets.
- **Semi-log graphs** – used to show a variable's rate of change and illustrate an accelerating rate of growth over time.

2.3.4 Measures of Central Tendency

When you have a set of data and need to summarise it, you will often wish to establish an average that converts the data into a single number that you can use more usefully. The measures of central tendency help to capture a single number that is typical of the data. There are three measures of central tendency:

- **Mean** – the average value of all the data.
- **Median** – the middle item with exactly half the data above and below it.
- **Mode** – the most common number that occurs.

Mean

There are two types of mean that can be calculated: the arithmetic mean and the geometric mean.

Arithmetic Mean	Geometric Mean
The arithmetic mean (also simply referred to as the 'mean' or 'average') is likened to a centre of gravity of the set of observations. In finance, the arithmetic mean is used for making investment decisions where forward-looking measures are appropriate. One common method for working out the average return is to combine the returns over a series of identical time periods (eg, monthly or annually), as follows: $\mu = \Sigma_{i=1}^{n} \frac{X_i}{n}$ where: μ = the arithmetic mean n = the total number of time periods Xi = the data point at the i^{th} position The difference between each return from the mean is the deviation. Deviations from the mean provide important information about the risk of the security. For example, if you have six investment funds in your portfolio that produce returns of 7%, 8%, 9%, 10%, 11% and 12%, then the average (or mean) return is: (7% + 8% + 9% + 10% + 11% + 12%) / 6 = 9.5%	The geometric mean represents the average rate of growth or return over a set of values. It provides an accurate measure of average growth when dealing with different rates over multiple periods, as it accounts for the compounding effect. Hence, the geometric mean is also referred to as compound returns: $\mu_{geom} = \sqrt[n]{\Pi_{i=1}^{n}(1+X_i)} - 1$ where μ_{geom} is the geometric mean. To compute the geometric mean accurately, each return must be transformed into a return relative (ie, adding 1 to each return); this is necessary because if returns in the time series are negative or zero, this could lead to anomalous results in the calculation. The average return is regenerated by subtracting 1 from the result. For example, if a deposit of $10,000 is expected to earn 5% this year, 6% next year and 5.5% in the third year, then the geometric mean rate of return is: $\sqrt[3]{(1+0.05)(1+0.06)(1+0.55)} - 1$ $= 0.05499 \text{ or } 5.499\%$

The geometric mean for a sample set of returns will nearly always be less than the arithmetic mean. This difference becomes more pronounced as the variability of returns in the sample increases (in other words, the greater the fluctuations in returns within the dataset, the larger the disparity between the arithmetic and geometric means).

Median

The median is the middle value of a dataset, when the values are ordered in ascending order. Hence, the median represents the point where half of the data lies above and half lies below the middle value.

If there is an odd set of numbers in the data set, then use the following formula:

$$\text{Median} = n+1 / 2$$

where n = the number of values in the data set.

Example

In a data set of: 3, 13, 2, 34, 11, 26, 47

then the sorted order becomes: 2, 3, 11, 13, 26, 34, 47

Here, the median is 13, since there are three numbers on either side of it.

Conversely, if the data has an even set of numbers, then the median is equal to the average of the two middle items:

$$\text{Median} = \text{Value below the median} + \text{Value above the median} / 2$$

Example

If the data set were instead: 3, 13, 2, 34, 11, 26, 47, 14

then the sorted order becomes: 2, 3, 11, 13, 14, 26, 34, 47

Here, the numbers 13 and 14 are the two middle terms, so the median is 13+14 / 2.

Mode

The mode is the value that occurs most frequently in a dataset. It is especially relevant in cases where certain values occur more frequently than others.

It is possible to have more than one mode in a dataset. If two numbers occur with the same highest frequency, the dataset is bimodal. Where there are more than two modes, the dataset is multimodal. Datasets may have no mode, if no values occur more frequently than the others.

2.3.5 Measures of Dispersion

Having calculated a typical value from the data available, we also need to assess how widely the data points are spread around this average. Understanding the variability of investment returns is the basis of many hedging techniques and serves as an important indicator of portfolio performance.

We can quantify such variability this through the use of dispersion measures, including the following:

- Range
- Inter-quartile range
- Variance
- Standard deviation.

Range

The simplest measure of dispersion is the range, which is the difference between the highest and lowest values in a data set.

Example

The following numbers represent the returns from an investment fund over a ten-year period:

Year	1	2	3	4	5	6	7	8	9	10
Return	13	11	2	6	5	8	7	9	7	6

Using the range measure, we find that the fund's returns span a range of 11 (ie, 13 – 2).

The main drawback of using range as a measure of dispersion is that it is distorted by extreme values and ignores the numbers in between. This limitation can be mitigated by using other measures of dispersion, such as the inter-quartile range, variance or **standard deviation** (although they too have their own limitations, as discussed below).

Inter-Quartile Range (IQR)

The inter-quartile range (IQR) ranks data, such as the performance returns from comparable investment funds, and presents it as a series of quartiles. It then measures the difference between the first quartile (also known as the 25th percentile or Q1) and the third quartile (the 75th percentile, or Q3), in order to provide an indication of the spread of the middle 50% of the data:

$$IQR = Q3 - Q1$$

Q1 is the median of the lower half of the data, while Q3 is the median of the upper half. If there is no exact middle value, the quartiles are calculated as the midpoint between the two closest values.

By focusing on the central 50% of the data, the IQR helps to minimise the impact of extreme values or outliers that may distort other measures of dispersion. A smaller IQR indicates that returns are tightly clustered together (ie, there is less variation in performance), while a larger IQR implies that the returns are more spread out (ie, greater variability or inconsistency).

Example

The following figures represent the returns from several comparable investment funds. The data is first ranked in order of highest to lowest, and the set is then divided into quartiles.

Fund	A	B	C	D	E	F	G	H	I	J	K	L
Return	9%	8%	7.5%	7%	6.5%	6%	5.75%	5%	5%	4.75%	4%	3.5%
Quartiles	1st Quartile			2nd Quartile			3rd Quartile			4th Quartile		
Inter-quartile range				←						→		

The value for the first quartile is 7.25% (ie, halfway between 7.5% and 7%, since the first quartile represents the midpoint of the lower half of the data) and the value for the third quartile is 4.875% (ie, halfway between 5% and 4.75%). Hence, the IQR is 2.375% (ie, 7.25% – 4.875%).

A fund with a return in the second quartile would rank in the top half of fund performances, while a fund in the fourth quartile would have delivered returns that were exceeded by 75% of the sample.

While the IQR is a useful tool for understanding the spread of the central portion of the data and minimising the influence of outliers, it excludes data points outside the range. As a result, it does not account for the full distribution – particularly the extreme values, which may still be significant in some situations. Additionally, the IQR assumes that the data is relatively symmetric around the median, which is not always the case. The variance and standard deviation measures can help to provide a more complete picture of the data's spread by incorporating all data points (including outliers) to capture the overall dispersion of the data set.

Variance

Variance measures the spread of data by determining how far each data point deviates from the arithmetic mean. It is determined by first finding the difference between each data point and the mean, then squaring these differences, and summing up the results.

If calculating the variance for a population, the sum of squared differences is divided by the total number of data points (or n):

$$\text{Population variance}\left(\sigma_p^{\,2}\right) = \frac{\Sigma\left(x - \bar{x}\right)^2}{n}$$

Alternatively, if calculating the variance for a sample, the sum of squared differences is divided by n – 1. This adjustment ensures that the estimate of the standard deviation is more representative of the true population variability, as we are not basing the calculation on the whole (only a subset of it).

The correction reduces the potential for sampling error, and ensures a more accurate estimate of the variance:

$$\text{Sample variance}\left(\sigma_s^2\right) = \frac{\Sigma\left(x-\mu\right)^2}{n-1}$$

Variance is useful in that it provides a measure of dispersion and is used to calculate the **beta** of a stock, but it results in a value in different units than the original. It is much easier to measure dispersion when it is expressed in the same units, and this is known as standard deviation.

Standard Deviation

The standard deviation of a data set is simply the square root of the variance. It is the most commonly used measure of dispersion and shows how values are distributed around the mean. The formula for calculating it is as follows:

Population standard deviation (σ) = √(Population variance)

Sample standard deviation (σ) = √(Sample variance)

Although the variances and standard deviations of both ordered raw and frequency distribution data can be calculated quickly and easily using a scientific calculator, it is useful to understand how to work through the calculation manually.

Variance and standard deviation are covered in more detail in section 2.4.1.

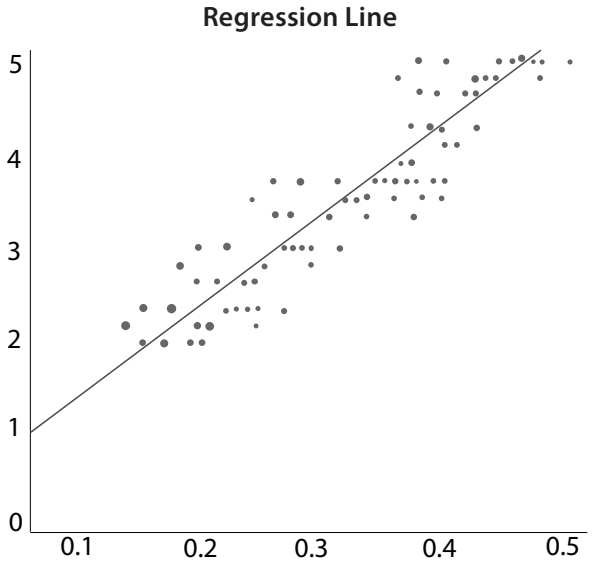
2.3.6 Correlation and Linear Regression

Linear regression (also called regression analysis) is a statistical tool used to quantify the relationship between two variables. It helps to determine the degree to which changes in one variable (ie, the independent variable) affect another variable (ie, the dependent variable). For example, linear regression can be used to assess how a price increase impacts demand, or how changes in the money supply influence inflation.

Linear regression is closely related to correlation because both measure the strength and direction of the relationship between two variables. However, while correlation quantifies the strength and direction of that relationship (ranging from -1 to +1), linear regression goes a step further by estimating the actual equation that represents this relationship. In other words, correlation tells you if there is a relationship and how strong it is, while linear regression helps you to understand the nature of that relationship and predict the value of the dependent variable based on the independent variable.

To analyse the regression, data is collected, and a model is developed to estimate the quantitative effect of one variable on another. The statistical significance of the estimated relationship is then assessed, providing confidence in how accurately the observed relationship represents the true relationship in the population.

A common way to explore potential relationships is by displaying the data as a scatter plot, which visually displays the relationship between the two variables over time. While this can reveal patterns or trends, it does not establish causality. To determine which variable is causing the observed change, further analysis (eg, using additional variables or conducting tests for statistical significance) is necessary.



- An upward sloping line, as shown above, indicates a positive relationship between the two variables – this means that as the independent variable increases, the dependent variable also increases.
- Conversely, a downward sloping regression line represents a negative relationship, where an increase in the independent variable leads to a decrease in the dependent variable.
- A horizontal line with a slope of zero suggests no relationship between the variables, so changes in the independent variable have no effect on the dependent variable.

Additionally, the steepness of the slope reflects the strength of the relationship: a steeper slope indicates a stronger effect, with larger changes in the dependent variable for each unit change in the independent variable, and a shallower slope indicates a weaker effect.

2.4 Risk and Return Measures

Learning Objective

3.2.2 Understand the main risk and return measures, and how they are used within asset and portfolio evaluation, and their purposes: holding period return; total return and its components; standard deviation; volatility; correlation; risk-adjusted performance measurements; benchmarking; R-squared

2.4.1 Variance and Standard Deviation

There are various ways to measure risk. Usually, these measure risk in terms of the degree of fluctuation (or volatility) that an investment has shown historically. We can observe this volatility by looking at graphs of share prices or share indices over time, which show the changes in asset values.

A common method to quantify this fluctuation is the standard deviation, which measures how widely the value of an investment deviates from its historical mean (or average):

- The lower the standard deviation, the less the returns fluctuate around the average, indicating lower risk.
- The higher the standard deviation, the greater the variation in returns from the average, implying higher risk.

Knowing the standard deviation can help us to understand the range of returns we may expect from an investment. For example, suppose an investment has an average annual return of 9% with a standard deviation of 4%. In this case, we can expect that:

- there is a 2/3 probability that the annual return will be between 5% and 13% (ie, 9% ± 4%), and
- there is a 1/3 probability that the annual return will be below 5% and above 13%.

The volatility of a share or fund can be compared with a benchmark (ie, a standard against which its performance is evaluated). This benchmark could be the volatility of an index most closely related to that share or fund (eg, the standard deviation of a blue-chip company's shares might be compared to that of the FTSE 100, S&P 500 or STOXX China A 50). For a fund, the comparison might be with other funds in the same sector. Investments with high volatility involve higher risk, as there will be more variation in returns compared to lower-volatility investments. Rational investors should seek to hold investments that offer higher-than-average returns with low volatility.

The variance is another measure of portfolio returns observed for a security in a historical time series. For a population, it can be calculated by using the following equation:

$$\text{Variance}\left(\sigma^2\right) = \sum\left(X_i - \mu\right)^2 / n$$

where:

X_i	=	the series of individual returns in each time period
n	=	the number of returns sampled over the time period
μ (the Greek letter mu)	=	the average return of the sampled returns, determined by calculating the arithmetic mean or the geometric mean of the time series.

When calculating the variance or standard deviation of a sample, recall from section 2.3.5 that the denominator becomes n – 1.

Additionally, σ (the Greek letter sigma) is the standard deviation of the portfolio of returns, commonly known as the risk of the security, and it is the square root of the variance:

$$\sigma = \sqrt{\text{Variance}}$$

We can use the standard deviation (σ) and the average return (ie, the arithmetic mean, μ) to calculate the coefficient of variation (CV), which measures the amount of risk taken for each 1% unit of return.

This allows us to compare the risk/return profiles of two investments:

$$\text{Coefficient of variation } (\text{CV}) = \sigma / \mu$$

Example

Determine the variance and standard deviation (risk) of an investment based on annualised returns of 5%, 15% and 25% over the past three months.

Month	Monthly return, X_i (annualised %)
1	5
2	15
3	25
Arithmetic mean (μ) =	**15**

Deviation $(X_i - \mu)$	Deviation squared $(X_i - \mu)^2$
-10	100
0	0
10	100
Sum =	**200**

Variance (σ^2)	=	Sum/3	= 66.67
Standard deviation (σ)	=	√Variance	= 8.16

$$\text{Average return } (\mu) = \frac{(5\% + 15\% + 25\%)}{3} = 15\%$$

$$\text{Variance } (\sigma^2) = \left[\frac{(5-15)^2 + (15-15)^2 + (25-15)^2}{3}\right] = \frac{200}{3} = 66.67 \text{ (to 2 decimal places)}$$

$$\text{Standard deviation } (\sigma) = \sqrt{\text{Variance}} = \sqrt{66.67} = 8.16\% \text{ (to 2 decimal places)}$$

$$\text{CV} = \frac{8.16}{15} = 0.54$$

This means that for 1% of return gained from this investment, an investor is taking on 0.54 units of risk. Investors who are selecting and comparing investment choices will prefer investments that have low risks (ie, low CV values).

2.4.2 Beta

Beta is a measure of volatility in relation to the overall market. Another way of looking at this is that beta represents the correlation between a portfolio's return and the market's return.

To calculate beta, a scatter plot is created of the portfolio's returns (on the y-axis) against the market as a whole (on the x-axis), then regression analysis is used to draw a line of best fit. The slope (gradient) of this line represents the beta:

- If **β=1**, the portfolio has a similar volatility to (and moves in line with) the market as a whole.
- If **β>1**, it is more volatile than the market as a whole. For example, if a portfolio has a β of 1.5, then it has 50% greater volatility than the market.
- If **0<β<1**, it is less volatile than the market as a whole. A portfolio with a beta of 0.7, for example, has 30% less volatility.
- If **β<0**, then the portfolio moves in the opposite direction to the market. The number gives the strength of this relationship, as described above.
- If **β=0**, there is no clear relationship between the two.

Thus, beta measures the amount of systematic risk that a portfolio exhibits.

By definition, the beta of the benchmark is 1, as it measures the volatility of the benchmark relative to itself.

2.4.3 Correlation and Covariance

Correlation is a keystone feature of portfolio construction theory.

In investment terms, correlation is an estimate of the extent to which the values of different types of investments move in tandem with one another in response to changing economic and market conditions.

Correlation is measured on a scale of -1 to +1. Investments with a correlation nearer to +1 tend to rise and fall in value at the same time, while investments with a correlation nearer to -1 are more likely to rise and fall in value in opposing cycles. The definition of how strong a relationship between two variables can vary greatly among investors, but broadly they are as follows:

- Correlations from 0.66 to 1 demonstrate strong relationships.
- Correlations between 0.33 to 0.66 demonstrate moderate relationships.
- Correlations between 0 and 0.33 demonstrate zero to low-level relationships.

Thus, diversification benefit is maximised by holding investments exhibiting low (ie, close to zero) correlation. It is worth noting, though, that correlations do not remain constant – they are dynamic. Correlation changes over time and in unpredictable ways. It would be ideal if two asset classes had positive real returns expectations and consistent negative return correlation with each other. Unfortunately, there are no such pairs of investments. Using historical data, it is only possible to forecast the correlation between two asset classes.

Mathematically, correlation and covariance are closely related statistics that measure the relationship and the dependency between two variables. The key difference between them, though, is that covariance indicates the direction of the linear relationship and the degree of co-movement as an absolute figure; while correlation measures both the strength and direction, and standardises the result to a scale of -1 to +1. Therefore, covariance is more useful when the units of measurement are important (eg, when assessing the magnitude of movement in original units, such as currency or percentages), and correlation for standardised comparisons (eg, comparing the strength of relationships between different datasets or asset classes).

Example

The daily returns of two stocks, stock A and stock B, have a correlation of +0.80. This indicates a strong positive relationship between the two: when one increases, the other tends to increase as well. This value reflects the consistency of their relationship over time.

If the covariance between these returns is +2, this also indicates that when stock A increases, then so does stock B. Unlike correlation, this number does not provide insight into the strength of the relationship. Instead, it shows the direction and degree of co-movement between the two stocks, based on the units of measurement and the positive nature of the relationship.

This relationship between the two statistics means that if we know one of these values, then we can easily calculate the other:

$$Cov_{AB} = \rho_{AB}\, \sigma_A\, \sigma_B$$

or, alternatively:

$$\rho_{AB} = Cov_{AB} / \sigma_A\, \sigma_B$$

where:

Cov_{AB} = the covariance of returns between security A and security B
ρ_{AB} = the correlation coefficient between returns of security A and security B
σ_A = the standard deviation of security A
σ_B = the standard deviation of security B

2.4.4 Total Return

An investor needs to know about the success of their investments. Thus, an accurate way must be found to determine investment performance that can provide a foundation for further analysis.

Total return is a measure of investment performance that includes the change in price of the asset plus any income (dividends and interest). It is assumed that all income is reinvested. The calculation of total return is expressed as a percentage of the purchase value.

In an investment management context, there are three different methods used to measure portfolio performance:

- holding period yield (HPR)
- money-weighted rate of return (MWRR), and
- time-weighted rate of return (TWRR).

Holding Period Return (HPR)

When comparing the returns on one investment with another, in the context of their relative degrees of risk (measured by standard deviation), we should remember to include all the total holding period returns. The total holding period return (HPR) on an investment is made up of:

- the income earned on it (ie, any dividends or interest paid) over the period
- the current yield, and
- the capital appreciation yield

$$\text{Holding period return (HPR)} = \frac{D + V_1 - V_0}{V_0}$$

where:

V_1 = the price or value at the end of the holding period
V_0 = the price or value at the beginning of the holding period
D = the sum of all income received from the investment over the holding period

Money-Weighted Rate of Return (MWRR)

The MWRR is used to measure the performance of an investment that has had deposits and withdrawals during the period of investment. More simply, this method takes account of the timing and amount of all money flows into and out of the investment over a review period. It is also referred to as the internal rate of return (IRR).

The MWRR calculation is a modification of the HPR calculation. When new funds are invested or withdrawn during the year, the calculation can be modified. This will allow for the differences in the timing of capital additions or withdrawals, with a weighting incorporating the number of months remaining at the time of the additions or withdrawals.

The formula for the MWRR is, therefore:

$$\text{Money-weighted rate of return}\left(\text{MWRR}\right) = \frac{D + V_1 - V_0 - C}{V_0 + \Sigma\left(C \times n / 12\right)}$$

where:

C = the net new money introduced during the year (if added, it is a positive figure; and if withdrawn, it is a negative figure)
N = the number of months remaining in the year at the time that the addition/withdrawal took place

Example

A portfolio was worth £30,000 at the start of the calendar year and £34,000 at the end of the calendar year. During the year, an additional £4,000 had been invested at the end of April and £1,000 withdrawn at the end of October. There was an income payment of £150 during the year.

There has been a net cash inflow of £3,000 during the year (ie, £4,000 – £1,000), so C = £3,000.

The MWRR would be:

$$\text{MWRR} = \left(150 + 34{,}000 - 30{,}000 - 3{,}000\right) / \left[30{,}000 + \left(4{,}000 \times 8/12\right) + \left(\text{-}1{,}000 \times 2/12\right)\right]$$

$$= 1{,}150 / \left(30{,}000 + 2{,}666.67 - 166.67\right)$$
$$= 0.0354 \text{ or } 3.54\%$$

Time-Weighted Rate of Return (TWRR)

The term 'time-weighted' refers to the fact that returns are averaged over time. The TWRR removes the impact of cash flows on the rate of return calculation, hence this is a preferred method in the investment management industry.

The TWRR is established by breaking the whole investment period into a series of sub-periods: monthly, quarterly or another time period. A sub-period is created whenever there is a movement of capital into or out of the investment. Immediately prior to this point, a portfolio valuation must be obtained to ensure that the rate of return is not distorted by the size and timing of the cash flow. The holding period return of each sub-period is calculated, then all of the sub-period returns are linked together. The TWRR is calculated by compounding the rate of return for each of these individual sub-periods, applying an equal weight to each sub-period in the process, as follows:

$$\text{TWRR} = \left(1 + R_1\right)\left(1 + R_2\right)\ldots\left(1 + R_N\right) - 1$$

where R_i is the simple return in each sub-period, calculated as:

$$R_i = \left(V_1 - V_0\right) / V_0$$

Example

A portfolio is valued at £1,000 at the beginning of October and grows in value to £1,100 by 15 October. It receives a cash inflow of £215 on 16 October, and at 31 October is valued at £1,500.

Using TWRR, a percentage return is calculated for each separate period as follows:

$$\text{Period } 1: r = 1{,}100 / 1{,}000 - 1 = 0.10$$

$$\text{Period } 2: r = 1{,}500 / (1{,}100 + 215) - 1 = 0.141$$

$$\text{TWRR} = (1 + 0.10)(1 + 0.141) - 1 = 1.2551 - 1 = 0.2551 \text{ or } 25.51\%$$

In many cases, the differences between the MWRR and TWRR will be relatively small, but wide variations can occur in certain circumstances. As a result, the TWRR is more widely used.

2.5 Risk-Adjusted Performance Measures

Having calculated how a portfolio (or fund or security) has performed, the next stage is to compare its performance against the market as a whole or against its peer group. This is the function of risk-adjusted performance measurements, of which the following are the traditional methods in use:

- Sharpe ratio
- Sortino ratio
- Treynor ratio
- Jensen's alpha
- **Information ratio**.

2.5.1 Sharpe Ratio

The Sharpe ratio measures the return over and above the risk-free interest rate from an undiversified equity portfolio for each unit of risk assumed by the portfolio, where risk is measured by the standard deviation of the portfolio's returns.

The ratio is expressed as follows:

$$\text{Sharpe ratio} = \frac{(R_P - R_F)}{\sigma}$$

where:

R_P = the return on the portfolio
R_F = the risk-free return
σ = the standard deviation of the portfolio

Example

An investor expects their stock portfolio to return 12% next year. If returns on a risk-free investment are 5% and the portfolio carries a 0.06 standard deviation, the Sharpe ratio is:

$$\text{Sharpe ratio} = \left(0.12 - 0.05\right) / 0.06 = 1.17$$

This means that for every unit of risk, they are earning 1.17 units of excess return.

A portfolio with a higher Sharpe ratio than its peers or the benchmark is considered to have outperformed, indicating that the manager is delivering a higher average return per unit of risk.

2.5.2 Sortino Ratio

The Sortino ratio is a variation of the Sharpe ratio, differing primarily in the risk measure used to adjust the excess returns. While the Sharpe ratio considers total risk (as measured by standard deviation), the Sortino ratio focuses only on downside risk:

$$\text{Sharpe ratio} = \frac{\left(R_P - R_F\right)}{\sigma}$$

$$\text{Sortino ratio} = \frac{\left(R_p - T\right)}{\sigma_d}$$

where:

T = the required rate of return
σ_d = the standard deviation of the downside risk

As with the Sharpe ratio, a higher Sortino ratio indicates better risk-adjusted returns.

Example

The performances of two client accounts are shown in the table below. The annual return data for each account has been collated over a ten-year period.

a. Determine the Sharpe ratios of each client account if the risk-free rate is 2%.
b. Determine the Sortino ratios of each account based on the target return threshold of 4% for each one.

Which fund performs best in Sharpe and Sortino terms?

Year	Client H return(%)	Client Q return (%)
1	-2	-7
2	-2	-4
3	-2	-2
4	-1	4
5	0	5
6	5	7
7	7	8
8	9	9
9	14	13
10	18	14
Mean (μ)	4.60	4.70
σ	6.90	6.69

The annual mean return (μ) for Client H is 4.60% and its standard deviation of returns (σ) is 6.90%; this has been calculated using the formula for a sample, with a denominator of n – 1. For Client Q, μ is 4.70% and σ is 6.69%.

a. The Sharpe ratios are:

$$S_H = (4.60 - 2) / 6.90 = 0.38$$

$$S_Q = (4.70 - 2) / 6.69 = 0.40$$

Client account Q is a better performer on the basis of its higher Sharpe ratio.

b. To calculate the Sortino ratios, we have been told that the client return thresholds are set at 4% in each case. This means that any returns below 4% are considered risky. We determine the standard deviations of only the returns from each time series that fall below the 4% threshold level (T). These returns have been isolated for each client, and standard deviations of the residual returns are presented in the following table.

Year	Client H return(%)	Client Q return (%)
1	-2	-7
2	-2	-4
3	-2	-2
4	-1	
5	0	
σ	**0.80**	**2.05**

The standard deviations of the returns below the threshold are 0.80% for Client H and 2.05% for Client Q.

The Sortino ratios for each client account are therefore:

$$SR_H = (4.60 - 4) / 0.80 = 0.75$$

$$SR_Q = (4.70 - 4) / 2.05 = 0.34$$

The ranking based on Sortino is reversed, with Client H's returns outperforming according to this measure. Downside risk losses for Client Q's returns are asymmetrically skewed to the downside, and risks based on these returns are considered greater, with returns adjusted accordingly in the Sortino ratio.

2.5.3 Treynor Ratio

The Treynor ratio is again similar to the Sharpe ratio, but it divides the excess return by beta (β), as discussed in section 2.4.2:

$$\text{Treynor ratio} = \frac{(R_p - R_f)}{\beta}$$

where:

R_P = the return on the portfolio
R_F = the risk-free return
β = the beta of the portfolio

Hence, the Treynor ratio measures the performance for a portfolio that is already diversified, since beta captures only the systematic risk (not unsystematic risk). Again, the higher the ratio, the greater the excess return that is being generated for each unit of overall market risk.

2.5.4 Jensen's Alpha

Jensen's alpha – also called Jensen's measure, or simply alpha (α) – evaluates the performance of a well-diversified portfolio against a benchmark as predicted by the **capital asset pricing model (CAPM)**, assuming the same level of systematic risk as that of the portfolio. In other words, the benchmark's beta is the same as that of the portfolio.

CAPM is covered in section 3.3 of this chapter, but in short, it states that the fair return from a portfolio is the risk-free rate plus a market risk premium, adjusted by the beta sensitivity factor:

$$R_{CAPM} = R_F + \beta\left(R_M - R_F\right)$$

where:

R_F = the risk-free rate
β = the beta of the portfolio
R_M = the market-rate of return
$R_M - R_F$ = the market risk premium

In practice, the actual return from the portfolio is R_P. Hence, the difference between this actual return and the fair return predicted by the CAPM formula is called the alpha (α):

$$\text{Alpha}\left(\alpha\right) = R_P - R_{CAPM}$$

where:

R_P = the return on the portfolio
R_{CAPM} = the return predicted by CAPM

Hence, alpha measures how the portfolio has performed relative to its CAPM benchmark:

- If it has performed in line with the benchmark, it lies on the security market line (SML).
- If it has outperformed the benchmark, then it is positioned above the SML.
- If it has underperformed then it lies below the SML.

The extent of any residual outperformance or underperformance is known as the portfolio's alpha. Calculated alpha does not necessarily indicate that outperformance or underperformance is due to manager skill; rather, it represents the difference that cannot be explained by the CAPM model.

2.5.5 Information Ratio

The information ratio assesses the degree to which a portfolio manager uses skill and knowledge to enhance returns. It compares the excess return achieved by a portfolio over a benchmark to the portfolio's tracking error, which is calculated as the standard deviation of excess returns from the benchmark. The tracking error gives us an estimate of the risks that the manager takes in deviating from the benchmark.

The ratio is expressed as follows:

$$\text{Information Ratio} = \frac{\text{ER}}{\sigma_{\text{ER}}}$$

where:

ER = the arithmetic mean of excess returns
σ_{ER} = the standard deviation of excess return from the benchmark

A portfolio's performance may deviate from the benchmark due to the manager's decisions concerning asset weighting. If the portfolio outperforms, the ratio will be positive; if it underperforms, it will be negative. A high information ratio, therefore, indicates a more consistent and better-performing portfolio.

2.6 R-Squared

Portfolios and funds may have different levels of diversification. Hence, our next question is: how can diversification be measured in practice?

A statistical approach is taken. Without getting too technical, the returns of a fund (vertical axis) over a series of discrete periods are plotted on a scatter plot against the benchmark's returns (on the horizontal axis). A line of best fit is drawn through the points, as described in section 2.4.2, with beta represented by the slope and alpha by the intercept on the vertical axis. The fit of the line is measured by the **R-squared (R^2)**, also called the coefficient of determination.

R-squared is used to measure the extent of diversification within a portfolio relative to its benchmark. An R-squared value of 1 (ie, 100%) indicates that all of the portfolio's returns are completely explained by the benchmark. As the R-squared value decreases towards zero (ie, 0%), it suggests that a larger portion of the returns is not attributable to the benchmark's performance, thus pointing to the presence of unsystematic risk in the portfolio. In general, an R-squared of 0.7 (ie, 70%) or higher suggests a high correlation between the portfolio's and the benchmark's returns, between 0.4 to 0.7 (ie, 40% to 70%) indicates an average correlation, and less than 0.4 (ie, 40%) suggests a low correlation.

For example, an R-squared measure of 0.35 means that only 35% of the portfolio movements can be explained by movements in its benchmark index. Therefore, if an investor already owns a fund with a very high R-squared with a particular index, they might avoid buying another that correlates too closely to that index.

2.7 Benchmarking

If the performance of an investment fund or investment manager is to be assessed, then the first issue to address is how to measure that performance. Investment performance is usually monitored by comparing it to a relevant benchmark.

There are three main ways in which portfolio performance is assessed:

- **Comparison with a relevant bond or stock market index.**
  - An index comparison provides a clear indication of whether the portfolio's returns exceed that of the bond or stock market index that is being used as the benchmark return.
  - As well as the main stock market indices that are generally seen, many sub-indices have been created over the years which allow a precise comparison to be made.
- **Comparison to similar funds or a relevant universe comparison.**
  - Investment returns can also be measured against the performance of other fund managers or portfolios which have similar investment objectives and constraints.
  - A group of similar portfolios is referred to as an investment universe.
- **Comparison to a custom benchmark.**
  - Customised benchmarks are often developed for funds with unique investment objectives or constraints.
  - Where a portfolio spans several asset classes, a composite index may need to be constructed by selecting several relevant indices and then multiplying each asset class weighting to arrive at a composite return.

2.7.1 Alternative Benchmarking Methods

Rather than use an established index to benchmark portfolio performance, a peer group average is often employed. WM/Reuters (WMR) is a worldwide independent investment information services company which provides, among other services, portfolio valuation and performance measurement services to wealth managers and other investing institutions. Combined Actuarial Performance Services (CAPS) ltd is an independent investment performance measurement service for the UK; it was set up as a joint venture by firms of consulting actuaries.

Most pension funds adopt cautious investment policies, and the guidance and benchmarks they set for fund managers mean that most schemes keep their asset allocation close to the CAPS or WM/Reuters averages. Both create universes which are an aggregation of funds or portfolios with similar investment briefs or types of owner and are used for peer group comparisons. There are many specialist sub-groups of universe groupings to cater for a wide range of fund structures and investment management styles to provide a relevant and accurate relative comparison.

Global investment performance standards (GIPS) are not a way of benchmarking performance, but are global standards for calculating and presenting performance figures. As such, they represent a great leap forward for the performance measurement industry. Originally established in 1999 by the Chartered Financial Analyst (CFA) Institute, GIPS have been significantly enhanced over the years (most recently in 2020), and have been voluntarily adopted by industry representative organisations in over 40 countries to help promote best standards.

2.8 Measurement of Portfolio Performance

Learning Objective

3.2.3 Apply the theory of investment risk and return to the measurement of portfolio performance: holding period return; relative return; risk-adjusted returns; synthetic risk and reward indicators

2.8.1 Holding Period Return of a Two-Security Portfolio

Holding period return (HPR) is the total return received from holding an asset or a portfolio of assets over a period of time, generally expressed as a percentage. We can determine the HPR on a portfolio that is created from two securities, using the formula:

$$R_p = \left(W_A \times R_A\right) + \left(W_B \times R_B\right)$$

where:

R_P	=	the overall return on the portfolio composed of securities A and B
R_A	=	the return on security A
W_A	=	the weight (%) allocated to security A
R_B	=	the return on security B
W_B	=	the weight (%) allocated to security B
Note: $W_A + W_B$	=	100%

Example

An investor invested €1,000,000 in two securities. They allocated €600,000 of this money to a mutual fund P, and the rest (€400,000) to another mutual fund Q. The holding period return over the last year in fund P was 15% and that for fund Q was 20%. Determine the return they got from a portfolio created from the two funds.

The allocation to P is 0.6 (ie, €600,000 / €1,000,000), and to Q is 0.4 (ie, €400,000 / €1,000,000).

Note that both allocations sum up to 1. Thus:

$$R_p = \left(0.6 \times 15\%\right) + \left(0.4 \times 20\%\right) = 17\%$$

The weighted average returns of the individual components of the portfolio provide a combined return to the portfolio of 17%.

The relationship is linear. As more is allocated (weighting increased) to the higher return constituent Q, the overall return on the combined portfolio increases in a linear fashion.

In advanced practice, this idea is extended to incorporate a portfolio of many securities and asset classes. However, the mathematics and extension to a multi-security portfolio is beyond the scope of this syllabus.

2.8.2 Relative Return

The returns we have in an investment are normally stated in absolute terms. However, this return tells us very little about the performance of the fund when we compare it against another portfolio manager. Thus, it is normal to express an absolute return in relative terms.

Relative return is obtained by subtracting the absolute return on a portfolio from the return on an appropriate benchmark:

$$\text{Relative return of portfolio} = \text{Absolute return of portfolio} - \text{Absolute return of benchmark}$$

Example

A manager who is concerned about building a portfolio of blue-chip Japanese stocks can calculate their relative return by taking their return away from the return of the Nikkei 225. The index now acts as a large capitalisation equity benchmark.

If a portfolio of Japanese equities returned 17% over the last year and the Nikkei 225 returned 15% over the same period, then the portfolio's relative return is 2% (ie, the difference between the two).

2.8.3 Standard Deviation (σ) of a Portfolio

The σ of a portfolio composed of two securities can be calculated by using the Markowitz risk equation. This is probably one of the most mathematically challenging concepts that we have introduced in this book. However, time spent in understanding it thoroughly will be extremely useful.

The risk on a portfolio that is comprised of funds A and B is calculated from the variance and then expressed as σ. The famous portfolio risk equation in finance was presented by Harry Markowitz in 1952, for which he later gained the Nobel prize:

$$\sigma_{AB}^{\ 2} = W_A^{\ 2}\sigma_A^{\ 2} + W_B^{\ 2}\sigma_B^{\ 2} + 2W_A W_B \text{Cov}_{AB}$$

where:

σ_{AB}^2 = the variance of portfolio composed of securities A and QB
W_A^2 = the weight (%) allocated to A, squared
σ_A^2 = the variance of security A (ie, the σ of A, squared)
W_B^2 = the weight (%) allocated to B, squared
σ_B^2 = the variance of security B (ie, the σ of B, squared)
Cov_{AB} = the covariance of returns between security A and security B

Note that you will not need to know the above formula for your exam, but it is useful for you to understand the equation and the theory behind it.

Conceptually, the main point that is made in this equation is: when two (or more) securities are combined to form a portfolio, the resulting variance and its standard deviation (risk) is in practice often less than a weighted average of the risks of the constituents.

This effect is most potent when the correlation between two securities is less than perfect; that is, correlation is less than +1. This is why clients are advised to have a diversified portfolio.

The next question that arises is: how many securities should we have in a portfolio to provide good diversification? As a rough guide, a portfolio that is equally weighted in 15 to 20 securities should diversify specific risk, provided those securities are from several different countries/regions and industries/sectors, among other considerations (eg, market capitalisations and, in the case of bonds, maturities and durations).

Now, let us consider how the risk on a two-security portfolio can be calculated if we have obtained information about the model inputs.

Example

An investor invested 1,000,000 Swiss Francs (CHF) in two securities. They allocated CHF500,000 of this money to a fund P, and the rest (CHF500,000) to another fund Q. The holding period return over the last year in fund P was 15% and that for fund Q was 20%. The weighted average return they got from a portfolio created from the two funds was 17.5%.

Determine the risk of the portfolio PQ if the σ of P is 20% and that of Q is 30%. The correlation between P and Q is 0.5.

Weight in P, squared (W_P^2) = 0.5^2 = 0.25

Weight in Q, squared (W_Q^2) = 0.5^2= 0.25

Variance of P (σ_P^2) = 0.2^2 = 0.04

Variance of Q (σ_Q^2) = 0.3^2= 0.09

Cov_{PQ} = 0.5 x 0.2 x 0.3 = 0.03

Substituting these values into the Markowitz formula for portfolio risk:

$$\text{Variance of PQ}\left(\sigma_{PQ}\right)=\left(0.25\times0.04\right)+\left(0.25\times0.09\right)+\left(2\times0.5\times0.5\times0.03\right)=0.0475$$

$$\text{Standard deviation of PQ}\left(\sigma_{PQ}{}^{2}\right)=\sqrt{0.0475}=0.2179 \text{ or } 21.79\%$$

Portfolio PQ delivers an absolute return of 17.5% with risk of 21.79%.

If the correlation between P and Q was perfect (+1), instead of the +0.5 used in this example, then the risk on the portfolio P and Q would simply be an average of the two risks of P and Q in portfolio PQ: that is 25%. You will note that the risk we have in our portfolio calculation of 21.79% is lower than this average of the two.

This will always be the case for any portfolio where the correlation is not perfect. This is due to the fact that risk in a portfolio is not linearly dependent on the allocations of P and Q; instead, the risk will vary with allocation in a nonlinear fashion. In fact, the Markowitz risk formula suggests that there is a quadratic form to the equation. The diversification impact is greatest where two securities have perfect negative correlation (-1).

2.8.4 Risk Indicators

Regulations require that all undertakings in collective investments in transferable securities (UCITS) and packaged retail investment and insurance products (PRIIPs) provide a risk indicator in their key investor information documents (KIIDs) and key investor documents (KIDs). The type for each document is similar, but the specific criteria and calculation methodologies may differ.

For UCITS funds, the risk indicator is called the synthetic risk and reward indicator (SRRI). This is an overall measure of a fund's risk (and reward), ranging from 1 to 7, determined by the volatility of past returns as measured by its NAV over a five-year period. A lower the score indicates, lower risk, and therefore lower reward, while a higher score reflects higher risk and typically higher reward.

Similarly, all PRIIPs funds are required to provide a summary risk indicator (SRI). The SRI is a combination of two components:

- A market risk measure (MRM), which determines the investment's market risk on a scale of 1 (low risk) to 7 (high risk). Its calculation varies depending on the category of the PRIIP, thus ensuring it reflects each type's unique characteristics and volatility.
- A credit risk measure (CRM), which assesses credit risk on a scale of 1 (low risk) to 6 (high risk), considering factors such as issuer creditworthiness and default risk. The CRM is combined with the MRM to determine the overall SRI.

The SRRI and SRI may appear to be simple risk measures measures for a UCITS/PRIIPs fund respectively on the surface, but they are derived from a set of calculations:

- The standard approach to calculating SRRI uses weekly standard deviation (even for daily valued funds) for a period of 260 weeks (ie, five years).
- For the MRM, five years of historical data is used, when available; otherwise, two years of data for daily valued funds, four years for weekly valued funds, and five years for monthly valued funds. These timeframes ensure that the MRM accurately reflects the relevant historical performance and volatility of the specific PRIIP category.

For relatively new UCITS/PRIIPs funds, when there is limited data of past performances, the management company will need to identify a representative portfolio model that can be used to simulate the projected volatility.

2.8.5 Risk-Adjusted Returns of a Portfolio

In this section, we consider applications of the risk-adjusted returns previously discussed.

Risk Premium

As we saw, in section 2.1, the risk premium on an investment is the additional return it generates above the risk-free rate. Similarly, the risk premium of a portfolio of securities is the difference between its absolute return and the risk-free rate.

In the example below, we see how three risk-adjusted return measures – Sharpe, Sortino and Treynor – are used to evaluate performances.

Example

A performance analyst is preparing a report on two funds that their company is monitoring. They have obtained the following return and risk information of the funds, together with a MSCI ACWI Tracker fund that is a proxy for a diversified benchmark index:

Year	Fund R	Fund S	MSCI ACWI Tracker
1	-1	0	-4
2	7	16	22
3	16	2	16
4	18	16	20
5	-4	-1	-8
Mean Return %	**7.2**	**6.6**	**9.2**
Standard Deviation (σ) %	**9.83**	**8.65**	**14.11**
Beta (β)	**0.64**	**0.85**	**1.00**

If the risk-free rate is 3%, and based on a target return threshold (T) of 4% for each fund, evaluate the results in terms of Sharpe, Sortino and Treynor ratios.

Starting with the Sharpe and Treynor ratios, use the appropriate formulae to determine the index values for each fund first.

Sharpe Ratios:

Fund R: Sharpe ratio = (7.2 – 3) / 9.83 = 0.43
Fund S: Sharpe ratio = (6.6 – 3) / 8.65 = 0.42
MSCI ACWI Tracker: Sharpe ratio = (9.2 – 3) / 14.11 = 0.44

With the Sharpe ratio, results show that both funds R and S fail to outperform the benchmark. Fund R has a higher ratio than Fund S, hence Fund R outperforms Fund S.

Treynor Ratios:

Fund R: Treynor ratio = (7.2 – 3) / 0.64 = 6.56
Fund S: Treynor ratio = (6.6 – 3) / 0.85 = 4.24
MSCI ACWI Tracker: Treynor ratio = (9.2 – 3) / 1.00 = 6.20

The benchmark has a Treynor ratio of 6.20. Fund R has a Treynor ratio of 6.56, outperforming the benchmark. Fund R outperforms both the benchmark and Fund S, which has a Treynor ratio of 4.24.

Let us now calculate the Sortino ratios for each fund. To calculate the Sortino ratios, we have been told that the portfolio return threshold is set at 4% in each case. This means that any returns less than 4% are considered to be risky. We determine the standard deviations of only the returns from each time series that provided a return at or below the 4% threshold.

These returns have been isolated for each portfolio and standard deviations of the residual returns are presented in the following table:

Year	Fund R	Fund S	MSCI ACWI Tracker
1	-1	0	-4
2	-4	2	-8
3		-1	
Standard Deviation of the Downside (σ_d) %	**2.12**	**1.53**	**2.83**

Sortino Ratios:

Fund R: Sortino ratio = (7.2 – 4) / 2.12 = 1.51
Fund S: Sortino ratio = (6.6 – 4) / 1.53 = 1.70
MSCI ACWI Tracker: Sortino ratio = (9.2 – 4) / 2.83 = 1.84

Recall from section 2.5.2 above that the Sortino ratio deducts the required rate of return (in this case, 4%) rather than the risk-free rate (of 3%) from the return on the portfolio.

Both Fund R and Fund S have underperformed the benchmark. Looking at only the funds, though, notably the results have reversed – while Fund R has thus far achieved higher Sharpe and Treynor ratios than Fund S, its Sortino ratio is lower. This means that Fund R is demonstrating relatively greater risks on the downside than Fund S.

To summarise the results:

	Fund R	Fund S	MSCI ACWI Tracker
Sharpe	0.43	0.42	0.44
Treynor	6.56	4.24	6.20
Sortino	1.51	1.70	1.84

Moving on to a comparison between Fund R and the benchmark, even though Sharpe and Sortino indicate the benchmark was better than Fund R, Treynor suggests otherwise. There is now a conflict that is apparent between the three performance measures about whether R is better, or the benchmark is better. How can this difference in results between the measures be resolved?

We know the benchmark is a totally diversified fund – in the total risk of the security, only systematic risk is present and the unsystematic risk is zero. On the other hand, Fund R must have both the unsystematic and the systematic risks present in its standard deviation. The beta measure excludes unsystematic risk and, as a result, the performance of R is overstated with Treynor. The lack of diversification present in Fund R is ignored by Treynor, but is included in Sharpe and Sortino.

This simple analysis reveals to us that one performance measure cannot be used in isolation; and when combined with others, they all provide a much better assessment of performances.

Performance Analysis

Next, we use the same data provided in the earlier example to analyse how the two funds have performed relative to the risk-free rate and to each other. In section 2.5.4, we provided the formula for alpha and the return predicted by the CAPM. We rewrite the formulae below:

$$\text{Alpha} = R_P - R_{CAPM}$$

$$R_{CAPM} = R_F + \beta\left(R_M - R_F\right)$$

where:

R_P = the return on the portfolio.
R_{CAPM} = the return predicted by the capital asset pricing model (CAPM)
R_F = the risk-free rate
β = the beta of the portfolio
R_M = the market-rate of return

Example

Determine the alpha for Fund R and Fund S, given the following return information together with the fund betas. The risk-free rate is 3%.

	Fund R	Fund S	MSCI ACWI Tracker
Mean Return %	7.2	6.6	9.2
Beta (β)	0.64	0.85	1.00

CAPM Returns:

Fund R: RCAPM = 3% + 0.64 (9.2% – 3%) = 6.97%

Fund S: RCAPM = 3% + 0.85 (9.2% – 3%) = 8.27%

Alphas:

Fund R: α = 7.20% – 6.97% = 0.23%

Fund S: α = 6.60% – 8.27% = -1.67%

Alpha is used to identify superior performances. A positive alpha denotes superior performance that exceeds a fair return that is predicted by CAPM, while negative alpha denotes inferior performance against the model.

Interpretation of these results can only be done properly by further detailed analysis. However, based on the calculations for alpha, Fund R has positive residual returns and those for Fund S are negative. Therefore, Fund R has provided superior returns compared with Fund S.

Superior returns can result from the following two sources:

1. The fund manager has been successful in identifying undervalued securities consistently to generate a portfolio that meets the market forecasts. We say that the fund manager is demonstrating selection skills.
2. The fund manager has been able to time market turns by varying the composition in accordance with the rise and falls in the market. We say that the fund manager is demonstrating timing skills.

That said, the relationship between alpha and R-squared can provide additional insights into fund performance. For example, a high R-squared value for Fund R (ie, above 70%) suggests a strong correlation with the market, in which case Fund R's positive alpha may be attributed more to market movements than skilful management. If this coincides with a low R-squared for Fund S, this implies that Fund S's performance is less influenced by broader market trends, indicating that its results come from more active management.

If Fund S's low R-squared had corresponded with a positive alpha, this would imply a potentially higher degree of skilful management in selecting securities or timing market movements, potentially giving Fund S a better chance to outperform the market going forward.

3. Models of Investment Theory

The study of how markets behave, in terms of sentiment, is known as the study of market psychology. In essence, it is the study of the collective behaviour of all the investors (both buyers and sellers) making up a market.

3.1 The Efficient Market Hypothesis (EMH)

Learning Objective

3.3.1 Understand the main propositions and limitations of the efficient markets hypothesis (EMH): strong form; semi-strong form; weak form; assumptions and shortcomings

One of the key theories used in the study of market psychology is the efficient market hypothesis (EMH). The EMH is an economic and investment theory that posits all publicly available and relevant information about a particular security is reflected in the price and this is the security's fair value. This is provided that:

- The securities are freely traded (so that the pricing mechanism can work efficiently).
- The markets themselves are operationally efficient (so that supply and demand will lead to the price reflecting investors' informed viewpoints).

There are three versions of the EMH, depending on how efficient you believe the market actually is:

- **Weak form** – this assumes that the market price of shares currently reflects all relevant information implied in historic share prices. It is used synonymously with random walk theory, which suggests that changes in share prices evolve according to a random walk, so they are independent of each other.
- **Semi-strong form** – this assumes that the market currently reflects all information referred to in the weak form, plus all publicly available relevant information. Share prices will react to news and adjust to a new level. Directors and other insiders hold private information, and private information remains a knowledge advantage.
- **Strong form** – this assumes that the market price of a share currently takes into account all publicly and privately available relevant information. No investor will ever be able to make better-than-average returns with strong-form efficient markets, except through luck.

3.1.1 Assumptions and Shortcomings of EMH

Each form of the EMH is similar, in that they assume that because information is available, it will have been used by investors in arriving at their decisions (and therefore be reflected in current share pricing).

The validity of the theory is hotly debated among market practitioners and theorists; those who argue against it point out that just because information on a share is available, that does not mean that it will have been discovered (or taken into account) by an investor.

Further, it does not take account of the fact that some investors (particularly large institutions) have a long, drawn-out decision-making process – thus, the fact that they have information available to them and are using it does not mean that it has yet been reflected in a share's price through their buying and selling decisions.

Some other assumptions used in the EMH are as follows:

- A large number of competing profit-maximising participants analyse and value securities, each independently from the others.
- New information regarding securities comes to the market in a random fashion.
- The competing investors attempt to adjust security prices rapidly to reflect the new information (security prices adjust rapidly because numerous profit-maximising investors are competing against one another).

3.2 Modern Portfolio Theory (MPT)

Learning Objective

3.3.2 Understand the main principles of modern portfolio theory (MPT), the capital asset pricing model (CAPM), its application and limitations: risk-free rate of return; risk premium; cost of capital and return on capital; excess returns; correlation measures; risk and diversification; efficient frontier, portfolio optimisation and leverage; assumptions and shortcomings

Of the risk-adjusted performance measures that we have covered in section 2 (alpha, beta and so on), many can be found on most fund factsheets. What does this all mean, if anything?

To start, you need to have a brief understanding of the basic assumptions of Harry Markowitz's modern portfolio theory (MPT). While MPT's origins date back to the 1950s, it is still widely advocated today, although the assumptions that MPT is built upon are subject to ongoing debate.

The goal of MPT is to optimise the expected return from a set of investment, against a certain level of risk. Portfolio theories are indifferent to whether that return on investment is called 'income', 'return of capital' or any other term, so long as it is appropriately above the cost of capital to compensate investors for taking on those risks. Recall that the risk premium is the excess return required on an investment over that of a risk-free rate.

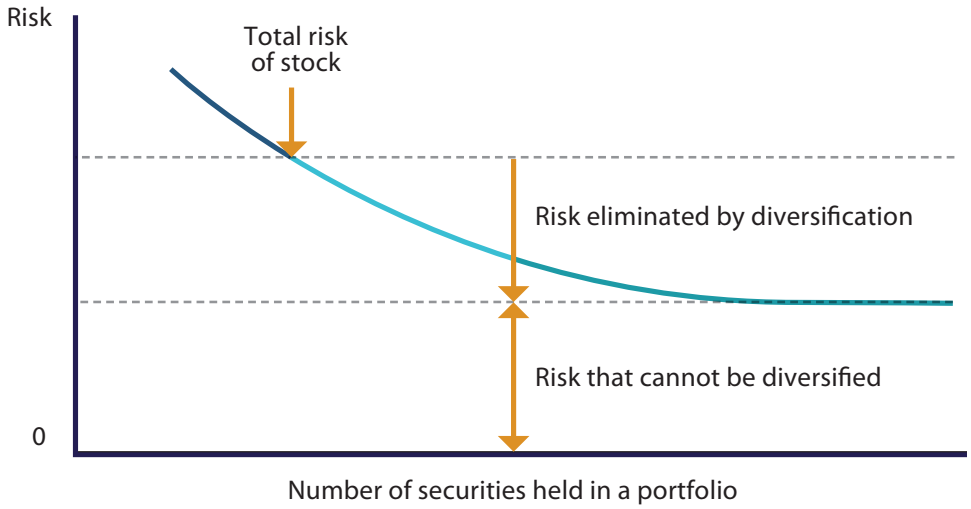
The underpinnings of MPT are twofold:

1. It assumes that rational investors will demand a higher rate of return to invest in a riskier asset than they will to invest in a less risky asset.
2. The cornerstone of MPT is that diversifying a portfolio by adding investments that do not behave in the same way reduces its overall risk, even if those investments individually are higher risk.

Investors probably keep the above in mind while building their portfolios without always realising it. Investors' asset allocation is the direct result of their time horizon, risk tolerance and financial goals; and to achieve those goals in a timely way, they take on a certain level of risk.

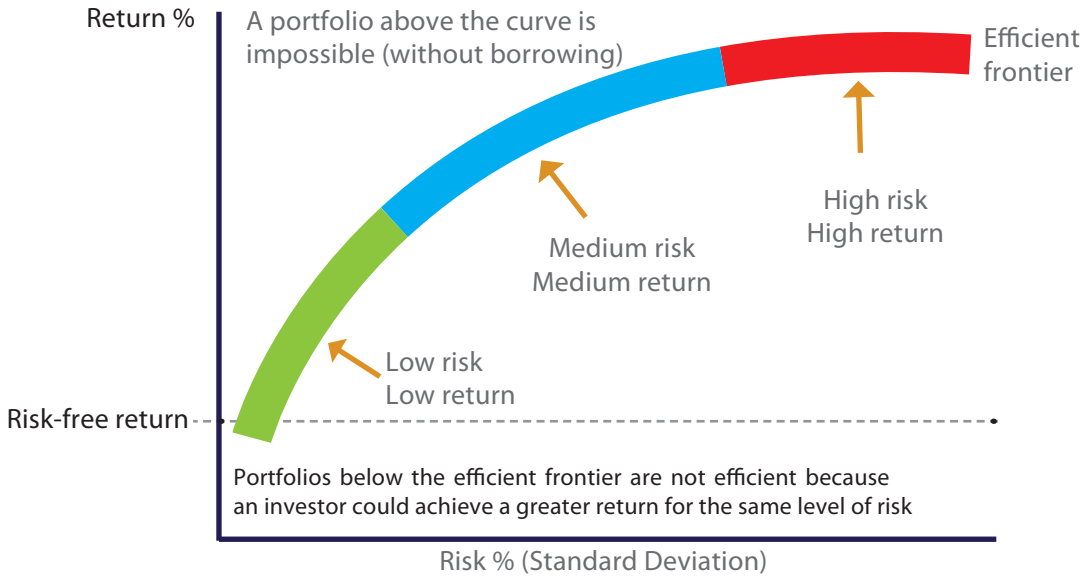
Furthermore, investors may mix different investments that are weakly correlated with the aim of protecting the value of their portfolio under different market conditions. For example, equity and bond markets do not typically move in the same direction. For most investors, the risk from holding any security is that the returns will be lower than expected.

MPT states that the risk for individual securities consists of systematic risk (see section 2.2.2) and unsystematic risk (see section 2.2.3), as follows:



This then leads on to how to identify the best level of diversification. MPT asserts that an investor can achieve diversification and reduce the risk of losses by reducing the correlation between the returns of the assets selected for the portfolio (where correlation describes the relationship between two or more variables).

This is described by the efficient frontier:



The above chart shows that it is possible for different portfolios to have different levels of risk and return. Each investor decides how much risk they can tolerate and diversifies their portfolio accordingly. The optimal risk portfolio is usually determined to be somewhere in the middle of the curve, because:

- As you move up the curve, proportionately higher risk is taken on for lower incremental returns.
- Positioning a portfolio at the low end of the curve is pointless, as investors can achieve a similar return by investing in risk-free assets.

It is possible for investors to increase their levels of risk and return above that offered by the market portfolio by borrowing funds (and as much as they wish) at the risk-free rate. In doing so, they can invest more than 100% of their investable funds in a risky market portfolio, therefore generating a higher return. However, while investors like return, they are generally risk averse, so this may not necessarily be a suitable solution.

3.2.1 Assumptions and Limitations of MPT

MPT has four key assumptions, as follows:

- Investors are rational.
- New information regarding securities comes to the market in a random fashion.
- The competing investors attempt to adjust security prices rapidly to reflect the new information (security prices adjust rapidly because numerous profit-maximising investors are competing against one another).
- Markets are efficient, financial returns follow a normal or 'Gaussian' distribution, and correlations between assets classes are fixed (section 3.7.2 of this chapter).

It follows that MPT has some shortcomings in the real world:

- Investors are not always rational, so they do not always select the least risky available portfolio.
- MPT assumes that it is possible to invest in securities whose performance is independent of the others in the portfolio (ie, a correlation of zero, or close to it) which, in theory, is difficult to achieve, if not impossible.
- Similarly, it would be logical to borrow at the risk-free rate in order to increase portfolio returns, but finding a truly risk-free asset is not an easy task.

3.2.2 Development of MPT

Since its origins, MPT has evolved into more sophisticated models, such as the capital asset pricing model (CAPM) in the 1960s and arbitrage pricing theory (APT) in the 1970s (which are considered in sections 3.3. and 3.4.1 respectively). In more recent years, the fundamental assumptions of MPT have been widely challenged by fields such as **behavioural finance** (see section 3.5). Regardless, MPT remains the backbone of finance theory and practice.

3.3 Capital Asset Pricing Model (CAPM)

The CAPM says that the expected return on a security or portfolio equals the rate on a risk-free security plus a risk premium (see section 2.1), and that, if the expected return does not meet or beat this required return, then the investment should not be undertaken.

CAPM has some built-in assumptions:

- All market participants borrow and lend at the same risk-free rate.
- All market participants are well-diversified investors and specific risk has been diversified away.
- There are no taxes or transaction costs to consider.
- All investors want to achieve a maximum return for minimum risk.
- Market participants have the same expectations about the returns and standard deviations of all assets.

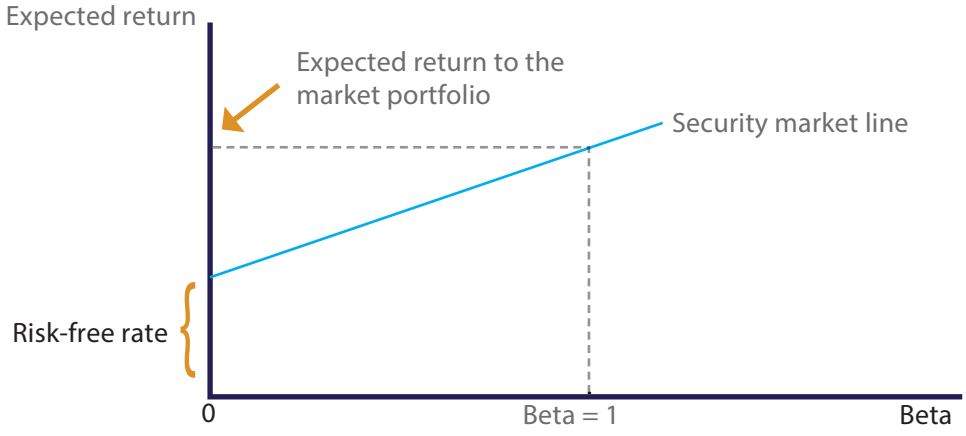
Using those assumptions, CAPM is used to predict the expected or required returns to a security by using its systematic risk (ie, its beta). We can use a security's beta in conjunction with the rate of return on a risk-free asset and the expected return from the market, to calculate the return we should expect from a security:

$$ER = R_F + \beta\left(R_M - R_F\right)$$

where:

ER	=	the expected return on the security
R_F	=	the risk-free rate
β	=	the security's beta
R_M	=	the market rate of return
$R_M - R_F$	=	the market risk premium

Using the CAPM equation, enables us to derive what is termed the security market line (SML). If a graph is plotted depicting the expected return from a security against its beta, then the relationship is revealed as a straight line:



The SML shows that the higher the risk of an asset, the higher the expected return. The market risk premium is the return that an investor will expect over and above the risk-free rate, as a reward for taking on the additional market risk.

We can use the above CAPM formula to calculate the return we should expect from a security. For example, if the current risk-free rate is 3% and the expected market return is 10%, the return we should expect from a security with a beta of 1.5 is 13.5%.

If the actual return is above 13.5% it would be plotted above the SML, indicating that the security is undervalued given its risk/reward trade-off. Conversely, if the actual return is below 13.5% then it would be plotted below the SML, suggesting the security is overvalued, as it is providing a smaller return for the level of risk involved.

That said, one major drawback of CAPM is that it is difficult to determine a beta, given the reliance on beta in the calculation. Beta is not constant; rather, it changes over time, so a security's beta today will likely be very different to its beta last year, and the year before that. Since beta is calculated using historical data points, it becomes less meaningful when being used to predict a security's future price movements.

3.4 Multi-Factor Models

Learning Objective

3.3.3 Understand the main principles behind arbitrage pricing theory (APT), its application and limitations: factor structure and analysis; macro-economic and market factors; arbitrage theory and mechanics; relationship with CAPM; assumptions and shortcomings

3.3.5 Understand the types and uses of multi-factor models, their assumptions and limitations

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CAPM expresses a simple relationship between risk and return. It predicts the expected return on a security as the return on a risk-free asset plus a risk premium. Because of this, the model is often referred to as a single-factor model – it focuses on only one factor: the security's sensitivity to the market, as measured by its beta.

However, the relationship between risk and return can be much more complex than what is captured by a single market index, as other factors may also influence a security's return. Different securities have different sensitivities to different types of market-wide shocks: inflation, business cycles, interest rates, and so on. Multi-factor models allow for different sensitivities, thus enabling a better understanding of each factor's contribution to a security's return.

There are three broad categories of multi-factor models:

1. **Macroeconomic models** use macroeconomic variables that significantly explain asset class returns. These variables influence either the expected future cash flows of companies or the interest rate used to discount these cash flows to the present. The factors in these models are generally assumed to be uncorrelated. For example, see arbitrage pricing theory (APT) in section 3.4.1.

2. **Fundamental models** use company-specific attributes to explain cross-sectional differences in stock prices. Common factors include the book-value-to-price ratio, market capitalisation, price-to-earnings ratio and financial leverage. For example, see the Fama-French three-factor model in section 3.4.2.
3. **Statistical models** apply statistical methods to historical returns data to identify portfolios that explain past return patterns. In factor analysis models, the factors are portfolios that best explain historical return covariances. In principal components models, the factors are portfolios that best explain historical return variances. For example, see the Carhart four-factor model in section 3.4.3.

In general, multi-factor models are used to assist in constructing portfolios with certain characteristics, such as a desired level of risk or those designed to track certain indices. However, these models do have limitations; for example, it can be challenging to decide how many and which factors to include. Additionally, the models also use historical information, which may not reflect current performance.

Further, many investors prefer to use CAPM to calculate rates of return because it is easier to implement, as it requires fewer factors and variables.

3.4.1 Arbitrage Pricing Theory (APT)

Arbitrage pricing theory was developed in the 1970s in response to the CAPM's main limitation that a single market beta is assumed to capture all factors that determine a security's risk and expected return.

Rather than relying on a single beta, APT adopts a more complex multi-factor approach by:

- seeking to capture exactly what factors determine security price movements by conducting regression analysis
- applying a separate risk premium to each identified factor, and
- applying a separate beta to each of these risk premiums, depending on a security's sensitivity to each of these factors.

You do not need to know the APT formula for the exam, but to help you understand the underlying concepts and principles, it is:

$$ER = R_F + (\beta_1 RP_1) + (\beta_2 RP_2) + \ldots + (\beta_N RP_N) + e_i$$

where:

ER = the expected return
R_F = the risk-free rate of return
β_i = the sensitivity of the asset or portfolio in relation to the i^{th} factor
RP_i = the risk premium of the i^{th} factor
e_i = the idiosyncratic or unexplained part of the return

Examples of factors that are employed by advocates of the APT approach include both industry related and more general macro-economic variables, such as anticipated changes in inflation, interest rates, exchange rates, market indices, industrial production, and the yield spread between investment-grade and non-investment-grade bonds.

Thus, APT is attractive in that it:

- explains security performance more accurately than CAPM by using more than one beta factor
- uses fewer assumptions than CAPM, and
- enables portfolios to be constructed that either eliminate or gear their exposure to a particular factor.

3.4.2 Fama-French Three-Factor Model

The Fama-French three-factor model is a well-known multi-factor model. Created by Eugene Fama and Kenneth French (who were former professors at the University of Chicago Booth School of Business), this model expands on the CAPM and aims to describe stock returns through three factors:

1. **Company size** – the outperformance of small companies relative to larger companies, referred to as 'small minus big' (SMB).
2. **Book-to-market values** – the outperformance of high versus low book-to-market value companies, referred to as 'high minus low' (HML). In other words, value companies beat growth companies.
3. **Excess returns on the market** – in other words, the portfolio's return above the risk-free rate (R_F). This compensates investors for the additional volatility of returns over and above the risk-free rate.

Once SMB and HML have been identified, their beta coefficients (ßi) can be determined by linear regression.

The mathematical representation of the Fama-French three-factor model is:

$$R = R_F + \beta_1 \left(R_M - R_F\right) + \beta_2 \left(SMB\right) + \beta_3 \left(HML\right) + e_i$$

where R is the expected rate of return, and (R_M – R_F) is the market risk premium.

3.4.3 Carhart Four-Factor Model

Mark Carhart, a finance researcher and market statistician, extended the Fama-French three factor model in 1997 by adding a fourth risk factor, which accounts for a serial dependence characteristic in the security return-generating process. Carhart observed that firms with positive (or negative) past returns tended to generate positive (or negative) returns for a few periods going forward.

This new risk factor is called the price momentum factor (MOM). It is estimated by taking the average return of stocks with the best performance over the previous year, minus the average return of stocks with the worst performance during the same period. Thus, this model can be written as:

$$R = R_F + \beta_1 \left(R_M - R_F\right) + \beta_2 \left(SMB\right) + \beta_3 \left(HML\right) + \beta_4 \left(MOM\right) + e_i$$

3.4.4 Assumptions and Limitations of Multi-Factor Models

Different multi-factor models are based upon different assumptions, and thus limitations. For example:

- Investors are diversified in the market, thus multi-factor models focus on systematic risk.
- Investors are rational and have the same expectations (and thus make the same decisions as each other).
- Returns of different securities are affected by a set of factors that are either common to all securities, or to a subset of securities.
- A linear relationship exists between expected returns and security risk.

In the case of APT, the underlying assumptions include the following:

- Securities markets are price-efficient.
- Investors seek to maximise their wealth, although do not necessarily select portfolios based on mean-variance analysis.
- Investors can sell securities short (ie, they can sell securities they do not own with the intention of buying them back at a lower price, to settle and profit from the transaction).
- Identified factors are uncorrelated with each other.

However, APT has its own shortcomings, which include a reliance on:

- identified factors being uncorrelated with each other, and
- stable relationships being established between security returns and these identified factors.

3.5 Behavioural Finance

Learning Objective

3.3.4 Understand the principles of behavioural finance: behavioural investor types; price reaction and price trends; barriers and biases – practical and psychological; relationship with EMH; assumptions and shortcomings

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While EMH (among other traditional finance models) asserts that markets are efficient and investors are rational – making logical decisions based on all available information, and displaying risk aversion – this is not always the case in reality. As a result, investors and researchers dispute the EMH both empirically and theoretically. Behavioural economists attribute imperfections in financial markets to seemingly irrational investment behaviour, and human errors in reasoning and information processing. Therefore, behavioural finance builds on where traditional financial models fall short.

In general terms, behavioural finance is '*the study of human fallibility in competitive markets*'. Behavioural finance aims to better understand and explain (through the use of psychology and other social sciences) how emotions and cognitive errors influence investors and the decision-making process – in other words, it describes how investors actually behave, rather than how they should behave. It recognises that investors sometimes act in their own best economic interests and sometimes they do not. Assuming that MPT largely correctly describes the way that markets operate, behavioural finance describes how investors might best profit from that knowledge.

Behavioural finance theorists argue that investors' decision-making is influenced by a range of biases. These biases take a number of forms, and different writers categorise them in different ways. Some have distinguished between cognitive biases and emotional biases, while others have considered cognition and emotion to be interdependent. Cognitive biases are associated with the way in which individuals process information, whereas emotional biases are where consumers may base investment decisions on feelings rather than fact.

3.5.1 Cognitive Biases

In some cases, cognitive biases may be seen as the result of heuristics. Heuristics are best seen as mental 'rules of thumb' which are used by investors and others to make decisions. In many situations, particularly where individuals are having to make decisions under time pressure, or are unfamiliar with the subject matter they are making decisions on, they will rely on such rules of thumb to allow them to make a quick decision. Hence, they are effectively mental shortcuts which an individual unconsciously takes in order to reach a decision, rather than being prevented from acting due to indecision.

In this sense, heuristics are helpful and, in many cases, will result in the right choices being made. However, like all shortcuts, heuristics run the risk of failing to take proper account of all the available information and, as a result, may lead to decisions which are biased in particular ways.

Two of the key cognitive biases are confirmation bias and hindsight bias:

- **Confirmation Bias** – confirmation bias suggests that an investor is more likely to look for information that supports their original idea about an investment rather than seek out information that contradicts it. As a result, this bias can often result in faulty decision making, because one-sided information tends to skew an investor's frame of reference, leaving them with an incomplete picture of the situation.
- **Hindsight Bias** – this occurs when a person believes (after the fact) that the onset of some past event was predictable and completely obvious, even though it could not reasonably have been predicted. Many events seem obvious in hindsight. Psychologists attribute hindsight bias to our innate need to find order in the world by creating explanations which allow us to believe that events are predictable. While this curiosity is useful in many cases (eg, in science), it can lead to erroneous links between cause and effect, resulting in oversimplified conclusions.

Other Cognitive Biases

There are too many different types of cognitive biases to cover in this workbook (there are over 180). Included below, however, are some of the other key cognitive biases:

- **Anchoring effect** – the tendency to rely too heavily on the first piece of information received. All subsequent judgements or opinions are based on that information.
- **Availability bias** – the tendency to use information that can be quickly recalled, when evaluating a topic or an idea, even if that information is not the best representation of that topic or idea. As a result, alternative solutions or opinions tend to be ignored.
- **Bandwagon effect** – the tendency to do (or believe) things because many other people do (or believe) the same. Also called herd mentality.

- **Framing** – using an approach or description of the situation or issue that is too narrow. The framing effect is a cognitive bias in which investors – draw different conclusions depending on how data is presented.
- **Information bias** – the tendency to measure, collect or interpret key information inaccurately. Also called observation bias or measurement bias.
- **Optimism bias** – the tendency to estimate that an outcome is positive, if the person making that judgement is in a good mood. Conversely to this, the pessimism bias is the tendency to estimate that an outcome is negative, if the person making that judgement is in a bad mood.
- **Overreaction** – the tendency to react disproportionately to new information, often led by either greed or fear. This can lead to securities becoming either overbought or oversold.
- **Representative bias** – the tendency for people to assess the likelihood of an event based on its similarity to other events.

3.5.2 Emotional Biases

Emotional biases involve an investor basing their decision on their individual feelings rather than on facts. As these biases are usually ingrained in investors' psychology, they are generally harder to overcome than cognitive biases.

Some types of emotional bias are as follows:

- **Loss aversion** – refers to people's tendency to strongly prefer avoiding losses to making gains. Some studies suggest that losses are twice as powerful, psychologically, as gains. This leads to risk aversion when people evaluate a possible gain. Conversely, people strongly prefer risks that might possibly mitigate a loss (called risk-seeking behaviour). Loss aversion implies that a person who loses, for example $100 will lose more satisfaction than another person will gain satisfaction from a $100 windfall.
- **Regret aversion** – arises from the desire to avoid feeling the pain of regret resulting from a poor investment decision. It embodies more than just the pain of financial loss; it includes the pain of feeling responsible for the decision that gave rise to the loss. This means that people's decisions are influenced by needs for the perception of self-control as well as the fear of experiencing regret. Thus, regret aversion can encourage investors to hold poorly performing shares, since avoiding their sale also avoids having to acknowledge the fact that a poor investment decision has been made.
- **Regret aversion** may also encourage investors to herd – eg, to invest more and in greater numbers in respected companies – as these investments carry implicit insurance against regret. This is often referred to as the 'fear of missing out' (FOMO). Decisions made with reference to a peer group make it easier to justify if such decisions turn out to be poor. It can be easier to *'explain away' losses on the grounds that 'most of my peers were also invested in these stocks',* rather than have to face the stigma of failure arising from making more innovative investments.
- **Overconfidence** – this is the tendency for people to have exaggerated views of, and be more confident in, their own abilities and judgements. It can be linked to the anchoring effect (a type of cognitive bias, above), particularly when individuals are asked to estimate a range of possible values.
- **Status quo bias** – this is the tendency to prefer things to stay relatively the same, as people may feel uncomfortable with uncertainty. The current base line is used as a reference point, and any change from that baseline is perceived as a gain or loss.

3.5.3 Theories of Behavioural Finance

The above biases, and their respective consequences, are best described by the theories of behavioural finance: prospect theory and regret theory.

- **Prospect theory** – this theory says people respond differently to equivalent situations, depending on whether it is presented in the context of a loss or a gain. Most investors are risk averse when chasing gains but become risk lovers when trying to avoid a loss. This loss aversion bias is an important example associated with prospect theory.
- **Regret theory** – regret theory is about people's emotional reaction to having made an error of judgement. Investors may avoid selling stocks that have gone down in order to avoid the regret of having made a poor investment decision and the embarrassment of reporting the loss. They may also find it easier to follow the crowd and buy a popular stock. If it subsequently goes down, it can be rationalised as '*everyone else owned it*'. For example, regret theory is closely linked to omission bias.

3.5.4 Behavioural Investor Types

'Behavioural investor types' refers to classifications of investors based on their psychological traits and the biases that they are more likely to exhibit. These types help to explain the variations in investment behaviour and decision-making.

Research in this area has identified four primary behavioural investor types:

- **Preservers** prioritise financial security and wealth preservation over risk-taking. They are often cautious and deliberative in their decisions, showing high sensitivity to losses and a preference for the status quo. Common biases include loss aversion and endowment bias.
- **Followers** lack personal investment strategies and often follow trends or others' advice. They are susceptible to overestimating their risk tolerance, and may make impulsive investment decisions based on the latest fads. Their biases include framing, recency and hindsight biases.
- **Independents** are analytical, confident and willing to take risks based on their research. They are prone to biases such as overconfidence and confirmation bias; and while they tend to be well-informed, they may act too hastily and fail to fully analyse risks before making decisions.
- **Accumulators** are risk-taking, entrepreneurial investors who focus on wealth accumulation. They are often confident in their abilities, but this can lead to overconfidence and high-risk decisions. They may not always follow structured investment plans, and can be prone to biases such as overconfidence and self-control issues.

By identifying a client's behavioural investor type, portfolio managers can better understand and mitigate the risks associated with that type. Additionally, when investors are able to recognise their own behavioural investor type, they can gain insights into their psychological biases, in turn helping them to make more informed decisions and proactively address those risks.

3.5.5 Assumptions and Shortcomings of Behavioural Finance

If we assume that financial markets are efficient and investors are rational, then why are there so many studies about investors' psychology?

First and foremost, portfolio managers seek to make money for their clients. That is the reason they care about the psychology factor of financial markets as well as investors.

The behaviour of investors is not always rational, so portfolio managers do not forget how the psychology factor of a person plays a substantial role in the behaviour of financial markets.

Modern finance theories have, however, almost completely ignored the role of the complex motivational and cognitive factors that influence investors' decision-making.

3.5.6 Conclusion

The field of modern financial economics assumes that people behave with extreme rationality, but they do not. The two common mistakes investors make (excessive trading, and the tendency to disproportionately hold on to losing investments while selling winners) have their origins in human psychology. The tendency for people to be overconfident causes the first mistake, and the desire to avoid regret prompts the second. Psychological research, therefore, teaches us about the true form of preferences, allowing us to make finance more realistic within the rational choice framework.

Behavioural finance is subject to criticism. While all of us are subject to behavioural biases from time to time, traditional economic theorists argue that market forces will always act to bring prices back to rational levels, implying that the impact of irrational behaviour on financial markets is generally negligible and, therefore, irrelevant.

3.6 Reducing Portfolio Risk

Learning Objective

3.3.6 Understand how to reduce portfolio risk: significance of alpha and beta; correlation and relative risk; principles of asset allocation; diversification, hedging and immunisation; active and passive strategies

6.2.1 Understand the aims and characteristics of the main fund management strategies and styles: indexing or passive management; active or market timing; passive/active combinations; long, short and geared; quantitative, trend and trading strategies

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The following sections discuss methods of assessing and managing risk within a portfolio.

3.6.1 Alpha, Beta and R-Squared

MPT statistics provide a snapshot of the portfolio's returns versus the return of the benchmark index.

Recall that:

- **Beta (β)** is an expression of a fund's sensitivity to movements in the benchmark index. Thus, it is a measure of volatility (or risk) relative to the index.
- **Alpha (α)** measures the difference between a fund's actual returns and its expected performance, given its level of risk (as measured by β). A positive alpha figure indicates the fund has performed better than its beta would predict, while a negative alpha indicates a fund has underperformed.
- **R-squared (or R^2)** reflects the percentage of a fund's movements that are explained by movements in its benchmark index. An R-squared of 1 (ie, 100%) means that all movements of a fund are completely explained by movements in the index; as the figure moves closer to zero (ie, 0%), the greater the indication that its returns are explained by other factors.

Use with Care!

MPT statistics can help inform investors about their fund's risks, value-added, and ability to diversify their portfolio. However, one needs to be careful about placing too much faith in them.

First, they are based purely on past performance. Looking at funds with attractive alphas and betas does not imply they will behave the same way in the future. For example, a fund might have had a different manager or strategy during the period over which the statistics were calculated. Further, the market environment could change dramatically.

Also, whenever you use alpha or beta, you need to be aware of the index used and the fund's R-squared with the index. If the R-squared is low, it means the points are widely scattered around the line and, therefore, that beta and alpha are not good estimates of actual fund behaviour. Thus, if you look at alpha and beta without checking R-squared, you may be misled by the results.

Look Beyond the Numbers

MPT statistics can be very useful, subject to the limitations described above. However, investors should remember to look beyond mere past performance when making investment decisions. There are many fundamental risks which may not be apparent from past performance. Credit risk is one notable example: in a strong credit environment, a bond fund laden with poorly-rated credits may perform well for years; but if the credit environment changes sharply, the fund could find itself in difficulty.

3.6.2 Correlation

Recall from section 2.4.3 that correlation is the degree of co-movement between two variables determined through regression analysis and quantified by the correlation coefficient. Correlation does not prove that a cause-and-effect or, indeed, a steady relationship exists between two variables, as correlations can arise from pure chance.

3.6.3 Asset Allocation

Asset allocation is the process of deciding where to invest in the market. It aims to balance the risk and reward by adjusting the percentage weights of a portfolio's assets according to the investor's investment objectives, risk tolerance and time frame.

A fund/portfolio manager begins by assessing the prospects for each of the main asset classes within each of the world's major investment regions, against the backdrop of the world economic, political and social environment. Within larger organisations, this is usually determined on a monthly basis by an asset allocation committee. The committee draws upon forecasts of risk and return for each asset class and correlations between these returns.

It is at this stage of the top-down process that top-down managers often use quantitative models, in conjunction with more conventional **fundamental analysis**, to assist in determining which geographical areas and asset classes are most likely to produce the most attractive risk-adjusted returns taking full account of the client's mandate.

Most asset allocation decisions, whether for institutional or retail funds/portfolios, are made with reference to the peer group median asset allocation. This is known as asset allocation by consensus, and is undertaken to minimise the risk of underperforming the peer group.

When deciding if and to what extent certain markets and asset classes should be over- or underweighted, most managers set parameters (eg, tracking error or standard deviation of return) against peer group median asset allocations, such as the CAPS median asset allocation in the case of institutional mandates (see section 2.7.1). Alongside this, other decisions may also be taken – for example, whether to hedge market and/or currency risks.

Studies (the first of which dates back to 1986[2]) suggest that asset allocation accounts for over 90% of the variation in portfolio returns over time. While similar results have been reported in subsequent research[3], others argue that the figure is actually much lower than this on the basis that the original data is often misinterpreted[4].

3.6.4 Diversification

While systematic risk cannot be mitigated, unsystematic risk can through diversification (see sections 2.2.2 and 2.2.3 respectively). Spreading investments across a range of asset classes, sectors and geographical areas/markets, among other strategies, can help to reduce the risk of a downturn in any specific area. This is discussed in more detail in section 2.2.4.

3.6.5 Hedging

In finance, a hedge is a position established in one market in an attempt to offset exposure to price fluctuations in an opposite position in another market with the goal of minimising exposure to unwanted risk. There are many different ways to accomplish this, including insurance policies, forward contracts, swaps, options, many types of over-the-counter and derivative products and, perhaps most popularly, futures contracts.

2 Brinson, G.P., Hood, L.R. and Beebower, G.L., 1986. Determinants of portfolio performance. *Financial Analysts Journal*, 42(4), pp.39-44. https://doi.org/10.2469/faj.v42.n4.39

3 Brinson, G.P., Singer, B.D. and Beebower, G.L., 1991. Determinants of portfolio performance II: An update. *Financial Analysts Journal*, 47(3), pp.40-48. https://doi.org/10.2469/faj.v47.n3.40

4 Ibbotson, R.G. and Kaplan, P.D., 2000. Does asset allocation policy explain 40, 90, or 100 percent of performance?. *Financial Analysts Journal*, 56(1), pp.26-33. https://doi.org/10.2469/faj.v56.n1.2327

3.6.6 Immunisation

Immunisation, also called liability-driven investing (LDI) or duration matching, is a risk mitigation strategy that can be viewed as a special case of interest rate hedging. It involves matching the duration of assets and liabilities, thus minimising the impact of interest rates on a portfolio's net worth over time.

The main goal of LDI is to gain sufficient assets to meet all liabilities, both current and future.

Immunisation is particularly relevant for institutional investors with long-term liabilities (eg, pension funds and insurance companies). In pension funds, the promises made to pensioners in terms of benefits will represent the liabilities of the fund. Two of the biggest risks faced by pension funds are the effects of interest rate changes and inflation. In the past, these risks have been partially hedged by the extensive use of bonds. With immunisation, the focus has been on hedging these risks by the use of swaps and other derivatives – this provides greater flexibility and capital efficiency than the use of bonds.

More specifically, this strategy is perhaps most prominent in the funding schemes of defined benefit (DB) pension plans, which are designed to provide a predetermined pension upon retirement. The liabilities in these funds arise as a result of the guaranteed pensions they are supposed to provide to members upon retirement. They can often reach into millions of pounds , dollars, and so on, depending on the currency in which the scheme is denominated.

In recent years, DB schemes have fallen out of favour due to the significant cost involved in providing benefits to current and future members. The liabilities that the sponsoring companies and plan members must pay for has increased substantially, and this has caused some pension plans to close to new members, reduce benefits to retired members, or even shut down entirely.

3.7 Active and Passive Strategies

In generating a return, investors can apply two main strategies: active and passive, each of which we will now look at in turn.

3.7.1 Active Strategies

Active investing aims to produce returns above a benchmark index for an appropriate level of risk, by exploiting believed pricing anomalies. This is based on the belief that investors are emotional and irrational, and regularly display a 'follow the herd' mentality such that they buy investments too high and sell too low. Active investors believe they can profit by identifying stocks that are trading at prices below their value merits.

There are two main methods of constructing portfolios using an active management technique:

- **Top-down** – this type of active management involves the manager considering the big picture first. It involves three stages:
  - **Asset allocation** – see section 3.7.3.
  - **Sector selection** – once the asset allocation has been decided upon, top-down managers then consider the prospects for sectors within their favoured markets. Within equities, for example, this may include natural resources and technology; and within fixed income, government and corporate bonds.

    Sector selection decisions are usually made with reference to the weighting each sector assumes within the benchmark index, against which the performance in that market is to be assessed. Given the strong interrelationship between economics and investment, however, the sector selection process is also heavily influenced by economic factors, notably where in the economic cycle the economy is currently positioned.
  - **Security selection** – the final stage of the top-down process is deciding which individual securities should be selected within the favoured sectors. A combination of fundamental and technical analysis will typically be used in arriving at the final decision (see below).

    To outperform a predetermined benchmark, the manager must be prepared to assume an element of tracking error (more commonly known as active risk) relative to that benchmark. Active risk arises from holding securities in the actively managed portfolio in differing proportions from that in which they are weighted within the benchmark; the higher the level of active risk, the greater the chance of outperformance, although the probability of underperformance is also increased.

    It should be noted that top-down active management is an ongoing and dynamic process. As economic, political and social factors change, so do asset allocation, sector selection and security selection.
- **Bottom-up** – this describes an approach that focuses solely on the unique attractions of individual securities. Although the health and prospects for the world economy and markets in general are taken into account, these are secondary to factors such as whether a particular company is a possible takeover target or is about to launch an innovative product, for instance. In identifying securities, managers may utilise fundamental and technical analysis:

Fundamental Analysis	Technical Analysis
Fundamental analysis attempts to measure a company's intrinsic (or 'fair market') value based on macroeconomic factors (eg, the overall economy and industry conditions) and company-specific factors (eg, revenues, earnings, future growth, return on equity, profit margins and management). The end goal of performing fundamental analysis is to produce a value that an investor can compare with the security's current price, with the aim of figuring out what sort of position to take with that security (underpriced = buy or long, overpriced = sell, short or do not trade). This method of security analysis is considered to be the opposite of technical analysis. Although most analysts use fundamental analysis to value equities, this method of valuation can be used for just about any type of security. For example, an investor can perform fundamental analysis on a bond's value by looking at economic factors (eg, interest rates and the overall state of the economy) and information about the bond issuer (eg, potential changes in credit ratings).	Technical analysis involves analysing statistical data (eg, price movements, volumes) on the belief that a security's past trading activity and price changes are valuable indicators of future price movements. For this, technical analysts use charts and other tools to identify patterns that can suggest future activity. The field of technical analysis is based on three assumptions: 1. The market discounts everything. 2. Prices move in trends. 3. History tends to repeat itself. There are many different types of technical traders. Some rely on chart patterns, others use technical indicators and oscillators, and most use some combination of the two. In any case, technical analysts' exclusive use of historical price and volume data is what separates them from their fundamental counterparts. Unlike fundamental analysts, technical analysts do not worry whether a stock is undervalued, rather, the only thing that matters is a security's past trading data and what information this data can provide about where the security might move in the future.

A true bottom-up investment fund is characterised by significant tracking error as a result of assuming considerable active risk.

Investors may be wholly bottom-up, but may also consider top-down factors when choosing securities. For example, the global financial crisis influenced investors' attitudes towards banks, the COVID-19 pandemic towards technology and healthcare stocks, and the energy crisis towards the oil and gas sector.

Active investors can employ a variety of investment styles to achieve their aims, examples of which are covered in chapter 1, section 2.12.2 (bonds) and 3.9.1 (equities).

The benefits and limitations of an active strategy are as follows:

Benefits	Limitations
• Investors can tailor an active strategy to meet specific investment goals. • Active investors have the potential to generate better performance relative to a benchmark index over time, even after fees. • Investors have flexibility of choice and are free to choose assets that they believe will provide a strong return. • This flexibility allows investors to reduce risk (eg, they may move between specific economic sectors, asset classes or individual securities as market conditions change, and/or can use strategies such as put options to protect against losses). • Many active managers are supported by teams of analysts who carry out extensive research to identify attractive and suitable investment opportunities. • Active investing can offer a challenge which some may enjoy, and allows investors to be more involved in managing their money.	• Better performance is not guaranteed. Active strategies can lag their benchmarks if market movements are misjudged, or poor investment decisions are made. • Investors must be continuously vigilant about the performance of their investments, so active investing can be hard work and time consuming. • Consequently, fees for professionally managed portfolios tend to be high which has a compounding effect over time. • Top managers can be selective as to which new clients they take on (eg, they may set minimum initial investment thresholds, typically £250,000), thus limiting access for some investors. • Some actively managed funds may be 'closet trackers', in other words, they look like (and charge fees similar to) active funds, but behave like a passive fund.

3.7.2 Passive Strategies

Passive investors do not take long-term views on the economic viability of investments; instead, they seek to maximise returns by minimising buying and selling. This strategy is based on the belief that markets are efficient and quick to process new information (as described by the EMH). Consequently, passive investors believe that they cannot gain an advantage over other investors by trying to pick individual securities.

Passive investing requires a credible and liquid index to track. For equities, examples include the FTSE 100 in the UK and the S&P 500 in the US, as well as other global and regional indices (eg, the MSCI World Index). Bond indices include those published by FTSE, Bloomberg and iBoxx.

For more information on bond indices, see chapter 1, section 2.11. Passive bond strategies are covered in section 2.12.2 of that chapter. Also within chapter 1, equity indices are covered in section 3.7, and passive equity strategies in section 3.9.1.

3.8 Combining Active and Passive Management

Having considered both active and passive management, it should be noted that active and passive investment strategies are not mutually exclusive. Rather, a combination of different styles can be incorporated, some examples of which we will now consider.

3.8.1 Core/Satellite

This is an investment strategy designed to minimise cost, volatility and tax liability, while providing an opportunity for outperformance. This is achieved by incorporating traditional securities in passively managed funds (core), to be held for the long term: this is typically 70–80% of the portfolio's value, to minimise the risk of underperformance. The balance is then held in a number of specialist actively managed funds or individually selected securities (satellite), comprising holdings that the investor expects will outperform the market and which are fine-tuned over time.

The core can also be run on an enhanced index basis, whereby specialist investment management techniques are employed to add value.

These include stock lending and anticipating the entry and exit of constituents from the index being tracked. In addition, indexation and active management can be combined within index tilts. Rather than hold each index constituent in strict accordance with its index weighting, each is instead marginally overweighted or underweighted, relative to the index based on their perceived prospects.

3.8.2 Smart Beta

Smart beta funds have grown in popularity in recent years and combine the passive approach of an index tracker fund with a degree of active management. The objective of smart beta funds is to overcome the main drawback of passive funds, which automatically follow the market up and down, and cannot avoid exposure to any troublesome holdings. Smart beta achieves this by creating their own benchmark consisting of stocks that exhibit certain behaviours (eg, low volatility and consistent strong dividends). The creation of the benchmark is the active part of the strategy which then becomes passive as the fund tracks the benchmark.

3.8.3 Smart Alpha

Smart alpha funds aim to benefit from an investor's best investment ideas, independently of markets movements. The way in which smart alpha works is very similar to smart beta, in that an investor creates a custom benchmark (active) that tracks their best investment ideas (passive). A key difference, though, is that the index's exposure to the wider market (ie, beta) is hedged out, thus enabling the strategy to capture pure alpha.

A smart alpha strategy is therefore 'market-neutral'; in other words, it does not move with the broader market, but instead follows the performance of the investor's individual ideas.

3.9 Active Market Timing Strategy

As opposed to a passive buy-and-hold strategy, an active market timing strategy seeks to maximise returns and to minimise volatility by responding to intermediate market moves. Portfolios are positioned to take advantage of both the up-trends and the down-trends (ie, go long or short, depending on conditions). Thus, in theory, it is possible to make money as long as the markets are trending in one direction for a consistent period of time.

Key Chapter Points

- Money has a 'time value': having it now is better than having a promise of it in the future.
- Compounding and discounting are key concepts in calculating returns through time.
- Inflation (even small increases in inflation) erodes the value of money over time. The 'real rate of return' measures how much is being earned, over and above the rate of inflation.
- Investors face a variety of investment risks.
- In general, seeking a higher return involves taking higher risks. This means that losses could be incurred instead of the higher return hoped for. Investors in risky investments require a 'risk premium' – this is reflected in the amount by which the long-term higher average rate of return exceeds the risk-free rate of return on a very safe investment.
- Diversification involves choosing investments in different sectors, markets and asset classes, and choosing different investments within each of those areas.
- Overall risk can be measured from the variability or volatility of investment returns.
- Volatility arises from:
  - the 'systematic' fluctuations in the wider market, which cannot be diversified away, and
  - the 'unsystematic' investment-specific risks of a particular investment.
- Standard deviations of returns from an investment measure their variability.
- Beta (β) measures how widely the returns from an investment vary relative to the market.
- Alpha (α) evaluates the performance of a portfolio against a benchmark with the same level of systematic risk as that assumed by the portfolio.
- R-squared (R^2) reflects the percentage of a fund's movements that are explained by movements in its benchmark index. A low R-squared suggests that beta and alpha are poor estimates of actual fund behaviour.
- Sharpe, Treynor and Sortino ratios are risk-adjusted performance measures. The Sharpe ratio divides excess return by the investment's standard deviation, while the Treynor ratio divides excess return by its beta. The Sortino ratio considers only the downside (or negative return).
- Data on past performance has its uses in checking the track record of certain types of investment, but future performance of risky investments may differ significantly from the past.
- Investors' decision-making and financial behaviour is affected by psychological influences and biases.

End of Chapter Questions

Think of an answer for each question and refer to the appropriate workbook section for confirmation.

1. **If the nominal rate of return on an investment is 6% and the current rate of inflation is 2%, what is the real rate of return?**
   Answer reference: Section 1.5

2. **Explain what is meant by the terms 'systemic risk' and 'systematic risk'.**
   Answer reference: Sections 2.2.1 and 2.2.2

3. **What is ESG, and what idea does it capture?**
   Answer reference: Section 2.2.6

4. **In the context of investment risk, what does a low standard deviation imply?**
   Answer reference: Section 2.4.1

5. **If two securities have negative correlation, how are they likely to perform in a portfolio?**
   Answer reference: Section 2.4.3

6. **What is money-weighted rate of return and how is it calculated?**
   Answer reference: Section 2.4.4

7. **What is time-weighted rate of return and how is it calculated?**
   Answer reference: Section 2.4.4

8. **What is the Sharpe ratio and how is it calculated?**
   Answer reference: Section 2.5.1

9. **What conclusion can be drawn from an investment with a high information ratio?**
   Answer reference: Section 2.5.5

10. **Using the CAPM formula, calculate the expected return for a stock with a beta of 1.5, where the risk-free rate is 2%, and the expected market return is 6%.**
    Answer reference: Section 3.3

Chapter Four

Taxation of Investors and Investments

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This syllabus area will provide approximately 16 of the 80 examination questions



1. Income Tax: Personal Taxation

Learning Objective

4.1.1 Understand how a private individual's income tax liability is determined using: tax rates; tax rate bands; personal allowances

4.1.3 Understand the application of income tax in respect of: individuals; trusts; charities

The income tax position for a private individual is dependent on the source of income (ie, employment, investments, savings, dividends or a combination of each).

In the UK, the following tax rates, bands and allowances (from HMRC) apply to income received for the 2025–26 tax year, unless otherwise stated. Candidates should be aware that the laws mentioned in this workbook may not always apply to Scotland (where income tax policy can diverge from the rest of the UK).

1.1 Income Tax Rates and Taxable Bands

Description	Tax Rate	Taxable Band
Starting rate for savings	0%	£0–£5,000
Basic rate	20%	£0–£37,700
Higher rate	40%	£37,701–£125,140
Additional rate	45%	Over £125,140

Note that these rates and bands are after the deduction of the personal allowance (see section 1.2.1).

1.2 Income Tax Allowances

Description		Allowance
Personal allowance		£12,570
Income limit for personal allowance*		£100,000
Blind person's allowance		£3,130
Personal savings allowance (PSA)	Basic rate taxpayers:	£1,000
	Higher rate taxpayers:	£500
	Additional rate taxpayers:	£0
Starting rate for savings		£5,000
Dividend allowance		£500
Marriage allowance		£1,260

* The personal allowance is reduced by £1 for every £2 of income over the £100,000 limit until it is fully exhausted. This reduction applies irrespective of age.

As we can see, there are a number of allowances and reliefs available which can reduce an individual's total tax bill.

The personal allowance, personal savings allowance (PSA), starting rate for savings and **dividend allowance (DA)** are all nil rate tax bands, which is the amount of income or dividends on which an individual does not have to pay tax. This means that, in some cases, there may be no tax to pay.

1.2.1 Personal Allowance and Blind Person's Allowance

In the UK, all individuals – regardless of age, gender or occupation – are entitled to a personal allowance, provided that they meet the residency requirements. The personal allowance enables individuals to earn a certain amount of income each year without it falling within the income tax net. If an individual does not use up their personal allowance in earned income, then unearned income (eg, investment income) may fall within this band.

People who are registered blind are entitled to an additional personal allowance, called the blind person's allowance. Where blind person's allowance applies, this is added to the individual's personal allowance, so the personal allowance may end up being more than £12,570.

1.2.2 Personal Savings Allowance (PSA)

The personal savings allowance (PSA) is the amount of savings interest (eg, interest payments income) that investors can earn without paying tax. It is £1,000 for basic rate taxpayers, but if any of their income falls within the higher income bracket, then the PSA is reduced to £500. For additional rate taxpayers, the PSA is reduced to nil.

Thereafter, savings interest is taxed at the applicable rate:

Basic rate taxpayers	20%
Higher rate taxpayers	40%
Additional rate taxpayers	45%

Interest generated within an **individual savings account (ISA)**, pension or other tax wrapper do not count towards the PSA as they are already tax-free.

1.2.3 Starting Rate for Savings

Separately from the PSA, individuals may also have a starting rate for savings, whereby they do not have to pay tax on up to £5,000 of interest on savings. This starting rate reduces by £1 for every £1 of other income (such as wages, pension, benefits and savings interest) above their personal allowance, meaning that it is zero if other income is £17,570 or more (ie, £12,570 personal allowance + £5,000 savings allowance).

Again, interest generated within an ISA, pension or other tax wrapper does not count towards the PSA as it is already tax-free.

For example, an individual earns £14,570 from their employment and £500 of savings interest. As their earnings exceed the personal allowance of £12,570 by £2,000, their starting rate for savings is £3,000 (ie, £5,000 – £2,000). Therefore, they will not have to pay tax on the savings interest.

1.2.4 Dividend Allowance (DA)

The dividend allowance (DA) means that individuals, regardless of the rate at which they pay tax, do not pay income tax on the first £500 they receive from dividends. Above this amount, dividends are taxed at the applicable rate (after deduction of the personal allowance and any other allowances).

Dividend income falling below the basic rate tax limit	8.75%
Dividend income over the basic rate tax limit and below £125,140	33.75%
Dividend income above £125,140	39.35%

The DA is available to anyone who has dividend income. Dividends on investments held within an ISA, pension or other tax wrapper do not count towards the DA as they are already tax-free.

The following example illustrates how income tax payments are calculated for an employed individual with interest and dividends from savings and investments.

Example

A 35-year-old has employment income of £51,350 in 2025–26. They also receive £500 in gross interest from cash savings held at the bank and £250 in gross dividend income from their holding of shares in XYZ ltd. Their total personal income tax liability is calculated as follows:

Employment income before tax		£51,350
Deduct: personal allowance		(£12,570)
Taxable income		£38,780
Basic rate band	£37,700 @ 20%	£7,540
Higher rate band	£38,780 – £37,700 = £1,080 @ 40%	£432
Interest income	£500	£0*
Dividend income	£250	£0**
Total income tax		£7,972

* Interest is covered by the PSA (of £500 for a higher rate taxpayer) so is tax-free.
** Dividends are covered by the DA so are tax-free.

It is worth noting that net pay may be lower in reality, as the examples here specifically exclude National Insurance contributions (NICs), which is covered in section 4.

1.2.5 Marriage Allowance

The marriage allowance allows one person in a marriage or civil partnership to transfer up to £1,260 (ie, 10% of the personal allowance, rounded up to the nearest £10) to their partner.

The marriage allowance can be claimed if all the following apply:

- The couple are married or in a civil partnership.
- The claimant's annual income is less than the personal allowance (ie, they are a non-taxpayer).
- Their partner's annual income is between £12,571 and £50,000 (ie, a basic rate taxpayer).
- The individual and their partner were born on, or after, 6 April 1935.

The transfer of the personal allowance will continue automatically, until the individual cancels it with HMRC (eg, if their income changes or their marriage/civil partnership ends).

Claims for marriage allowance can be backdated for up to four years, provided that the above criteria are met for each year applied for. This means that couples are able to make the following tax savings:

Tax Year	Personal Allowance	Maximum Transfer (10% of Personal Allowance)	Maximum Tax Saving (20% of Amount Transferred)
2021–22	£12,570	£1,260 (rounded up)	£252
2022–23	£12,570	£1,260 (rounded up)	£252
2023–24	£12,570	£1,260 (rounded up)	£252
2024–25	£12,570	£1,260 (rounded up)	£252
Total			**£1,008**

1.3 Income Tax in Other Countries

Generally, there are four types of tax system worldwide:

- **Zero taxation** – there are many countries where residents are not subject to any income tax; for example, the United Arab Emirates (UAE), Bermuda and the Cayman Islands.
- **Residential taxation** – individuals are only subject to a particular country's tax system if they are resident in that country (eg, the UK). In which case, income tax is payable on their worldwide income.
- **Citizenship-based taxation** – citizens are taxed, whether they live in the country or not, meaning they cannot escape paying income taxes by moving overseas. Only two countries operate a citizenship-based taxation system: the US and the East African nation of Eritrea.
- **Territorial taxation** – countries only tax individuals on income that they earn in that country, any foreign income is tax-free, whether remitted or not. For example, Hong Kong and Singapore.

Further, tax rates can vary widely between countries.

Due to these notable differences, it is important for individuals to be aware of how a country's tax system operates, should they wish to become, or remain, a citizen, live, or earn money in that country.

2. Income Tax: Taxation of Trusts and Charities

Learning Objective

4.1.2 Understand how the income tax liability for a trust is determined based on: trust type; tax rates; tax rate bands

4.1.3 Understand the application of income tax in respect of: individuals; trusts; charities

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A trust is a legal arrangement where one or more parties (the trustees) hold assets for the benefit of someone else (the **beneficiaries**). The person introducing the money or assets into the trust is known as the settlor. There are many different types of trust, as outlined in section 2.1.

Trusts are often used as part of financial planning arrangements as they can provide flexibility, a level of protection and control over the family assets, or protect family wealth against taxation/probate. Trusts in a family context are referred to as 'civil trusts' in some parts of the world. In some jurisdictions, though, trusts are generally not used for financial planning purposes (if at all) as alternative structures, such as wills or other forms of estate planning, are preferred or more widely recognised.

As trusts originated in England, a significant amount of trust law around the world today is based on English trust law. Notably, trust law does not exist in a number of jurisdictions (eg, within parts of continental Europe), where governments are reluctant to adopt trusts due to concerns that they may be used for tax avoidance or evasion; they may, however, still recognise trusts as instruments of foreign law. Where trust law does exist, there may be country-specific variations in terms of the circumstances in which they are used.

The rules in respect of tax and trusts can be complex, and can merit a whole book in their own right, especially where offshore trusts are concerned.

However, candidates need to be aware of the fact that, because trusts are not separate legal entities (in the way that companies are), the trustees are assessed on the income and gains earned by the trust in many cases.

Almost invariably, trustees pay the tax liability from the trust's assets, although there are some exceptions to this rule (see section 5.1.2 of this chapter).

2.1 Types of Trust

There are four main types of trust:

1. **Interest in possession trusts** – where a beneficiary (the life interest, also called a life tenant or, in Scotland, life renter) has an immediate right to the trust income as it arises or to the use or enjoyment of the trust property. Upon their death, another beneficiary (the remainderman) receives the trust capital. Also known as 'life interest trusts' or 'fixed interest trusts'.
2. **Discretionary trusts** – where the trustees generally have wide powers over the application of both the trust income and the trust capital. Also called accumulation trusts (not to be confused with accumulation & maintenance trusts, below).

3. **Accumulation & maintenance (A&M) trusts** – where one or more of the beneficiaries must become entitled either to the trust income or to the trust capital absolutely by a specified age not exceeding 25. Until then, the income must be accumulated or applied for the maintenance, education or benefit of the beneficiary.
4. **Bare trusts** – where the beneficiary has an immediate and absolute right to both capital and income, which cannot be taken away. Also called absolute trusts.

2.2 Taxation of Trusts

2.2.1 Interest in Possession (IIP) Trusts

The Trustees

The treatment for income tax depends on how the trust income is mandated to the beneficiary:

- If the income is paid to the beneficiary via the trust, the trustees are responsible for declaring and paying income tax on income received by the trust, at the basic rate tax (ie, 8.75% for dividends and 20% for all other income).
- If the income is paid directly to the beneficiary, the trustees do not need to report it on the trust tax return, which reduces their administrative costs; however, they will not be able to deduct any expenses from the mandated income.

The personal allowance, PSA, savings rate band and DA are not available to the trustees.

The Beneficiaries

- If the income is paid to the beneficiary via the trust, the trustees are liable for income tax at the basic rate (see above).
- If the income is paid directly to the beneficiary, then it is taxed at the beneficiary's marginal rate (ie, the rate on the highest part of their income) on the gross distribution. Any tax paid by the trustees will meet part of this liability.
    - If the beneficiary is a non-taxpayer, then they can reclaim any tax paid by the trustees.
    - Beneficiaries who are basic rate taxpayers will, therefore, have no further liability.
    - Higher and additional rate taxpayers will be liable for additional tax.

Beneficiaries can use the personal allowance, PSA, savings rate band and DA against trust income, where available.

2.2.2 Discretionary Trusts and Accumulation & Maintenance (A&M) Trusts

The Trustees

Trustees are responsible for declaring and paying income tax on income received by the trust.

In both discretionary trusts and A&M trusts, where total income is less than £500, there will be no income tax to pay. If total income is above £500, then the whole amount (not just the amount over £500) will be taxed at the 'trust' rate of 39.35% for dividends and 45% for all other income (eg, rental income and savings interest). These rates are equivalent to the additional rate for individuals.

The Beneficiaries

A beneficiary is taxable only on income that has been distributed to them by the trustees, or applied by the trustees for their maintenance, education or benefit, at their own marginal rate on the gross distribution. If the beneficiary is a non-taxpayer or a basic rate taxpayer, they can reclaim some, or even all, of the tax credit.

Trustees of a discretionary or an A&M trust have the power to make discretionary payments and therefore need to make sure that they have paid enough tax to cover the tax credit given to the beneficiary. They do this by using a 'tax pool', which keeps a record of all discretionary income payments they have made and the tax they have paid.

2.2.3 Bare Trusts

The tax treatment of these trusts reflects the substantive position. The trust is effectively ignored, with any income tax liability falling on the beneficiary at their own rates, subject to their own personal allowances. The exception to this principle is parental settlements (see section 2.2.4).

2.2.4 Parental Settlements

Parental settlements are a type of bare trust, whereby the assets are placed in trust by parents for their own minor children.

Minor children have their own personal allowances and starting/basic rate limits. However, if parents create a trust for the benefit of their own minor children, any income paid to the beneficiaries while they are minors and unmarried will be assessed on the parents, unless the total income paid to the beneficiary in any tax year is below £100 (or £200 if both parents give money).

Income generated by parental settlements is assessed on the parents, whether or not the income is distributed (subject to the £100 limit).

2.2.5 Trusts for Vulnerable People

Special tax provisions apply to any type of trust whose beneficiaries are disabled or relevant minors (such trusts being referred to collectively as trusts for the vulnerable):

- A **disabled person** is defined as someone who is eligible to receive any disability-specific benefit (eg, the adult/child disability payment, disability living allowance for adults/children, or personal independence payment), even if they do not actually receive it.
- A **relevant minor** is one who is under the age of 18 and has been predeceased by at least one parent.

A vulnerable beneficiary is also someone who is unable to manage their own affairs because of a mental health condition that is covered by the Mental Health Act 1983.

If a trust has a vulnerable beneficiary, the trustees can claim special tax treatment, whereby the trustees are entitled to a deduction of income tax against the amount they would otherwise pay. The trustees calculate what their trust income tax liability would have been if there was no claim for special treatment, which will vary according to which type of trust it is.

They then calculate what income tax the vulnerable beneficiary would have paid if that income had been paid directly to them as an individual; this calculation takes into account any other income, capital gains and allowances, but ignores any discretionary income payments to the beneficiary. The trustees can then claim the difference between these two figures as a deduction from their own income tax liability.

2.3 Taxation of Charities

In the UK, registered charities qualify for a number of exemptions, reliefs and allowances against income tax, capital gains tax (CGT) and tax on profits from certain activities. For example, they are exempt from paying stamp duty land tax (SDLT) on any property transactions and may be able to reclaim value-added tax (VAT) on any goods or services they acquire in the pursuit of their charitable aims.

In terms of income tax, most of the income received by charities is exempt from tax as long as it is used for charitable purposes. Charities can also claim tax relief on donations made by UK taxpayers under the Gift Aid scheme. However, they are unable to reclaim any tax deducted at source on dividends they receive.

For a charity to be eligible for UK tax reliefs such as Gift Aid, it must be a UK charity; donations to non-UK (eg, EU and EEA) charities no longer qualify.

If charities trade in the provision of goods and services, they may be subject to tax on profits. Also, if the level of income from trading activities exceeds £85,000 (until 31 March 2026), they will need to become VAT-registered and account for VAT in the usual way.

3. Taxation of Investment Income

3.1 The Income Tax Treatment of Various Asset Types

Learning Objective

4.2.1 Understand the tax treatment of investment income: savings income; dividend income; rental income

3.1.1 Savings Income

Savings income includes:

- interest from bank and building society accounts
- interest from accounts with providers such as credit unions and National Savings & Investments (NS&I)
- interest distributions (but not dividend distributions) from authorised unit trusts (AUTs), open-ended investment companies (OEICs), exchange-traded funds (ETFs) and investment trusts
- income from government and corporate bonds, and
- most types of purchased life annuity payments.

The PSA means that basic and higher rate taxpayers do not have to pay tax on the first £1,000 or £500 respectively of savings income that they receive (see section 1.2.2 on the PSA). For additional rate taxpayers, the PSA is zero.

3.1.2 Dividend Income

The DA means that individuals do not have to pay tax on the initial portion of their dividend income, no matter what non-dividend income they have (see section 1.2.4 on the DA). On receipt of the dividend (whether by cheque or directly into their bank account), the investor should also receive a voucher which sets out the sum they have received.

3.1.3 Rental Income

Notably, there are some differences between the tax treatment for residential properties (as well as holiday lettings), commercial properties and agricultural properties.

Residential Property

Rental income is taxed as business income and at normal income tax rates. It is treated as a single business, even if the investor has bought and lets out more than one property. A residential property investor who lets out several properties can offset losses from one against profits from another.

If the property is owned by an individual, the first £1,000 of property rental income (called the property allowance) is tax-free; this allowance is completely separate from the PSA. If the property is owned by a company, then rental income is treated in the same way as any other business income.

Landlords can offset their allowable expenses against the rental income when calculating the net taxable profits. Allowable expenses include items such as letting agents' fees, buildings and contents insurance, maintenance and repairs to the property (but not improvements) and service charges; in other words, costs associated with the day-to-day running of the property. On top of this, they are permitted to claim relief for finance costs (eg, mortgage interest) incurred on their let property, the tax relief on which is restricted to the basic rate of income tax (20%).

For people renting out a room in their own home, there is an exemption on the rent-a-room scheme where someone can earn up to £7,500 a year tax-free. Under the 'shared occupancy' test, landlords only qualify for the relief if they live in the property at the same time as the tenant for all, or part, of the rental period. This is aimed at closing a tax-free loophole, by stopping homeowners from profiting through rental property websites.

Any rental business loss can be carried forward and set against future profits of the same rental business in the following year.

Commercial Property

Rental profits from commercial property are taxed in the same way as any other rental income. As with residential property, an investor is entitled to a deduction against the rental income for the general costs of running the property (eg, repairs). Further, the investor is entitled to various capital allowances, which vary depending on the nature of the capital item involved.

Agricultural Property

If the rental business includes agricultural property, special provisions may apply for maintenance expenditure, including repairs and insurance. Landlords should keep a separate note of these expenditures, in order to arrive at the maximum relief that they can claim against their general income from other sources.

If any losses are made in the rental business, then these can be carried forward and set against future profits of the same rental business in the following year.

3.2 The Income Tax Treatment of Collective Investments

Learning Objective

5.1.2 Understand the tax treatment within the fund and for UK investors of income and capital gains arising from collective investments: investment trusts; exchange-traded funds; open-ended investment companies (OEICs); unit trusts

Distributions from collectives are always taxable, regardless of the unit/share class and whether the income is actually paid out or reinvested (if applicable). Collective investments are covered in more detail in chapter 5, and in this section, we look at their tax treatment.

3.2.1 Open-Ended Investment Companies (OEICs), Unit Trusts and Exchange-Traded Funds (ETFs)

The tax treatment of distributions from collectives depends on the type of investments in which the scheme invests. For simplicity, the text only mentions open-ended investment companies (OEICs), but it also refers to unit trusts and exchange-traded funds (ETFs).

OEICs Paying Interest	OEICs Paying Dividends
• If the OEIC holds 60% or more of its assets in fixed-interest securities, it pays interest. • Income will be paid gross and individuals will pay any tax due on this at the applicable rate for savings income via their tax return (see section 1.2.2).	• If the investments comprise less than 60% in fixed-interest securities, the OEIC pays dividends. • Dividends will be paid gross and individuals will pay tax at the applicable rate for dividends via their tax return (see section 1.2.4).

Equalisation Payments

When an investor first buys units or shares in a fund, they may receive an equalisation payment as part of the next distribution that the fund pays. This equalisation payment is treated differently for tax purposes.

When an investor buys units/shares, the price that they have paid is based on the net asset value (NAV) of the fund; that is, the value of the underlying portfolio plus any income that has been received but not yet paid out. When the next distribution is made, therefore, a part of the distribution that the investor will receive includes this income that they have paid for in the purchase price. It is effectively a return of part of the amount invested, and so is treated differently for tax purposes.

When the distribution is paid, the investor will receive a tax voucher from the fund manager that splits the payment into two parts: the normal distribution and the equalisation payment. As the equalisation payment is a return of the investor's money, it is not liable to income tax. Instead, as it is a return of the amount invested, the payment is deducted from the cost of the holding when calculating any chargeable gain on an eventual disposal.

Accumulated Income

If a fund does not pay out the income it earns during the year (ie, it is a roll-up or accumulation fund), but instead rolls it up in the fund's unit/share price, then the investor has nonetheless earned that income and should receive a tax voucher from the fund manager.

Unless the fund is held in a tax-efficient wrapper (eg, a pension or ISA), the investor must enter the details on their Self-Assessment tax return, and will be assessed on it. HMRC regards this as still being a receipt of income by the investor and will assess them for income tax on the amount accumulated.

3.2.2 Investment Trusts

Investment trusts receiving income from the assets they invest in will pay tax as follows:

- Domestic dividends are received and the investment trust has no further liability. This is known as franked income.
- Overseas dividends may be received net of foreign withholding tax. The investment trust is liable for corporation tax on the grossed-up income. Depending on any double taxation agreements (DTAs), some of the tax already withheld may be offset against this liability (see section 7.2 of this chapter).
- The investment trust is liable for tax on other income at the applicable rate of corporation tax.

However, provided they meet certain eligibility and ongoing conditions that enable them to be approved as investment trust companies, they are exempt from corporation tax on dividends or income received from their own investments.

An investor in an investment trust pays tax on the dividends received in the same way as they do for any other share.

Under the Investment Trusts (Dividends) (Optional Treatment as Interest Distributions) Regulations 2009, investment trusts that are invested in interest-bearing securities (among certain similar assets) are able to treat all or part of that payment as an interest distribution. For investors, this means that the payment is treated as savings income, in a similar way to OEICs, unit trusts and ETFs.

3.2.3 Real Estate Investment Trusts (REITs)

Retail estate investment trusts (REITs) are required to pay away at least 90% of the taxable income they receive in a year. They may pay dividends as either a property income distribution (PID), a normal dividend (non-PID), or a combination of the two:

- **PIDs** are taxed as property rental income in the hands of the investor (not as ordinary dividends). This tax is deducted at source at a rate of 20%, although non-UK resident shareholders in countries with double tax treaties with the UK for withholding tax may be eligible to claim a reduced rate from HMRC. Basic rate taxpayers have no further tax to pay; higher and additional rate taxpayers have a further tax liability of 20% and 25% respectively. Non-taxpayers can reclaim the tax withheld. Certain classes of investors (eg, charities, UK companies and pension funds) can register to receive these payments gross.
- The **non-PID** element of dividends is treated in exactly the same way as an ordinary dividend. The dividend allowance applies to the non-PID element only (not the PID element), after which REIT investors are taxed at their marginal rates.

The main benefit of a REIT over a traditional property investment trust or property company is that investors in the latter suffer more tax overall. That is, the traditional property company pays both corporation tax and CGT on its property-related activities, plus the investor pays income tax on their dividends. However, REITs do not pay corporation taxes.

As we can see, though, investors pay more income tax on their dividend than on other shares, because they are treated as rental income. While regular dividends are taxed at 8.75%, 33.75% or 39.35% for basic, higher and additional rate taxpayers respectively, REIT dividends are taxed at 20%, 40% or 45% respectively. Further, the deduction of 20% withholding tax means that basic rate taxpayers pay no further tax, while higher and additional rate taxpayers face an additional tax liability of 20% and 25% respectively.

4. National Insurance Contributions (NICs)

Learning Objective

4.3.1 Understand the basis on which National Insurance contributions (NICs) are levied: employers; employees; self-employed; voluntary

National Insurance contributions (NICs) build entitlement to certain social security benefits, including the state pension. The type and level of NICs paid depend on how much people earn and whether they are employed or self-employed. NICs cease in the year an individual reaches state pension age.

4.1 Who Pays National Insurance?

NICs are paid by employees and the self-employed aged 16 and over, providing that their earnings are above a certain threshold, and they stop at state retirement age.

The state pension age (SPA) has been undergoing radical changes since 2010. Under the Pensions Act 2011, women's SPA increased to 65 between 2016 and 2018, which meant that both men and women had the same SPA. The SPA is currently 66 for both genders, and it is due to increase further: to 67 between 2026 and 2028, and 68 between 2044 and 2046 (if not sooner).

Additionally, the normal minimum pension age (NMPA, which is the earliest a pension holder can access pension benefits without tax penalties) is currently 55, except for those with a protected pension age, who are in ill health, or who started taking those benefits before 6 April 2010. The NMPA will rise to 57 in 2028, and will be linked to the SPA with a ten-year differential thereafter.

4.2 How Much National Insurance is Payable?

The amount and type of NICs that are payable depend on whether the individual is employed or self-employed and how much they earn.

4.2.1 Employed

Employers are responsible for calculating, deducting, and paying Class 1 primary NICs (employees' contributions) to HMRC on behalf of all employees, including directors, earning above the earnings threshold. These must be deducted from their earnings.

Employers (or those treated as the employer, if the actual employer is outside the UK) must also calculate and pay Class 1 secondary NICs (employers' contributions) for all employees earning above the earnings threshold.

The rates and allowances are as follows:

Rates and Allowances – National Insurance Contributions (NICs)

Class 1	
Lower earnings limit (LEL), primary Class 1* *Earnings above this threshold are subject to the primary rate of NICs*	£123 pw
Upper earnings limit (UEL), primary Class 1 *Earnings above this threshold are subject to a reduced employees' rate of NICs*	£967 pw
Primary threshold (PT) * The point at which individuals start to pay NICs	£242 pw
Secondary threshold (ST) The point at which employers will pay the standard rate of employer's NICs	£175 pw
Employees' (primary) rate between the PT and UEL	8%
Employees' (primary) rate above the UEL	2%
Married women and widows rate between the PT and UEL	1.85%
Married women's rate above UEL	2%
Additional primary Class 1 rate on deferred employments	2%

Class 1	
Employers' (secondary) rate above ST	15%
Class 1A rate on employer-provided benefits	15%

* It is possible for an individual to earn up to £12,570 a year (ie, £242 a week) before paying any NICs – this is known as the primary threshold (PT). However, as long as earnings are greater than £123 a week, it is still possible to build an entitlement to state pension and certain other benefits; this is known as the lower earnings limit.

Employees pay 8% of earnings between the primary threshold (PT) and upper earnings limit (UEL), and a further 2% on all earnings above the UEL. Where earnings are between the lower earnings limit (LEL) and PT, employees do not pay NICs but are still credited with NICs. Employees earning less than the LEL do not pay NICs, nor are they credited with NICs.

Employers pay 15% of earnings above the secondary threshold (ST).

Employers must keep adequate records showing how NICs were calculated and what payments have been made for each employee.

4.2.2 Self-Employed

The self-employed pay Class 4 NICs, and, with effect from 6 April 2024, they may also choose to pay Class 2 NICs. The rates are as follows.

Class 2 NICs

Before the 2024–25 tax year, Class 2 NICs were mandatory for certain individuals, depending on their level of profits. Today, individuals can still pay Class 2 NICs voluntarily to qualify for contributory benefits (eg, the basic state pension).

While Class 2 contributions count towards certain benefits (eg, the basic state pension, maternity leave and bereavement benefit), they do not count towards the additional state pension, statutory sick pay or jobseeker's allowance.

Class 2	
Small profits threshold	£6,845 pa
Class 2 rate (the rate is higher for share fishermen and volunteer workers)	£3.45 pw

Class 2 NICs may be paid at a flat rate of £3.45 a week on earnings above the small profit threshold.

Class 4 NICs

The amount of Class 4 NICs to be paid in any tax year is based on the profits for that year, as a percentage of annual taxable profits. Class 4 NICs do not count towards benefit entitlements.

Class 4	
Class 4 lower profits limit	£12,570 pa
Class 4 upper profits limit	£50,270 pa
Class 4 rate between lower profits limit and upper profits limit	6%
Class 4 rate above upper profits limit	2%
Additional Class 4 rate where deferred has been granted	2%

On annual profits between the lower and upper profits limits 6% is payable; and over that amount, the rate is 2%.

Class 2 and Class 4 NICs are often paid through a self-assessment tax return, although some individuals working in specific jobs may wish to pay voluntary contributions instead.

Class 3	
Class 3 rate	£17.75 pw

4.3 Voluntary Contributions

Any individuals whose work or personal situation means that they do not currently have to pay NICs, or are not entitled to receive NI credits, may still be able to make voluntary contributions to fill in any gaps in their NI record. Voluntary contributions count towards some state benefits and can also increase the amount of benefit they receive.

Voluntary NICs are normally Class 3 contributions, paid at a flat rate by individuals wanting to fill gaps in their NIC record; however, if individuals are self-employed or living abroad, they may be able to pay Class 2 contributions voluntarily instead.

Any individual may choose to pay NICs voluntarily if they are:

- unemployed and not claiming benefits
- employed but had low earnings
- self-employed but do not pay NICs because of small profits
- a married woman or widow who cancels her reduced rate election partway through a tax year, or
- living or working abroad.

Normally, it is better for individuals to pay Class 2 contributions voluntarily than to pay Class 3 voluntary contributions as it will cost them less and they will receive a wider range of state benefits.

However, there are conditions that they will need to meet in order to pay Class 2 contributions if they are working outside the UK – individuals should contact HMRC to find out if they are eligible.

5. Capital Gains Tax (CGT)

Learning Objective

4.4.1 Understand the application of capital gains tax (CGT) in respect of: individuals; trusts; charities

4.4.2 Understand the application of CGT to the sale of assets, such as: shares; government bonds; corporate bonds; real estate; chattels

In the UK, capital gains tax (CGT) arises from the disposal of chargeable assets by a chargeable person. In order to calculate the CGT, we first need to define the terms 'disposal', 'chargeable assets' (and, following on from this, 'exempt assets') and 'chargeable person'.

Disposals

The term 'disposal' most commonly refers to the sale of a chargeable asset, although it can also mean:

- gifting of an asset (unless an exemption applies; eg, a gift between spouses and civil partners)
- the transfer of an asset to someone else
- the exchange of an asset for something else
- the receipt of compensation for an asset, such as receiving an insurance pay-out when an asset has been destroyed.

However, a disposal is not potentially chargeable to CGT, or allowable as a capital loss, if made between spouses or civil partners, made upon death or if the asset is exempt.

Chargeable and Exempt Assets

Chargeable assets for CGT are harder to define. Indeed, the easiest approach is to list some of the key 'exempt assets', in other words, those that do not create a CGT liability on disposal.

The main exempt assets are:

- an individual's principal private residence (PPR)
- gifts between spouses and civil partner (unless they are separated and did not live together during the tax year)
- gifts to registered charities
- government and qualifying corporate bonds (ie, a sterling-denominated security that represents a 'normal commercial loan' that has no rights of conversion to certain shares or other securities)
- premium bonds
- assets held in ISAs, junior ISAs (JISAs) and child trust funds (CTFs)
- most pension investments (however, property can be more complicated, as well as if the pension fund itself holds offshore funds)
- proceeds from most life policies, written in trust or in the hands of the original owner
- chattels (tangible moving objects) where the disposal proceeds do not exceed £6,000
- chattels deemed 'wasting assets' (ie, they have an expected useful life of less than 50 years)
- private motor vehicles
- betting, lottery or pools winnings

- foreign currency, when held for personal use
- shares in **venture capital trusts (VCTs)**, provided the company maintains its VCT status and certain specified criteria have been satisfied
- shares in **enterprise investment schemes (EISs)** and **seed enterprise investment scheme (SEIS)** as long as they have been held for at least three years, and
- personal injury compensation.

Chargeable assets include:

- property (not a principal private residence)
- land and buildings
- leases
- shares and investments
- antiques
- jewellery
- possessions of more than £6,000 in value, and
- business assets such as premises, goodwill and trademarks, if the business is run on a sole trader basis.

With regard to cryptocurrencies (ie, virtual or electronic currencies, such as Bitcoin), HMRC considers cryptocurrencies to be a 'chargeable asset', even though they are digital and, therefore, intangible. Most investors will likely buy and sell cryptocurrencies as an investment activity, just like they would stocks and shares, so any gains on disposal will typically be subject to CGT. Additionally, losses will be allowable (ie, they may be used to offset chargeable gains realised on other assets).

Chargeable Person

Individuals that are resident and ordinarily resident in the UK are known as chargeable persons for CGT purposes. Chargeable persons are potentially liable to CGT on capital gains made on the disposal of chargeable assets regardless of where in the world the capital gain arose.

A chargeable (or taxable) gain, or an allowable loss, is generally calculated as follows:

	£
Disposal consideration	X
Less incidental costs of disposal	(X)
Net proceeds	**X**
Less allowable costs	X
Chargeable gain (or allowable loss)	**X**

The incidental costs of disposal referred to above may include:

- valuation fees (but this does not include the costs of any appeal against HMRC's valuation)
- estate agency and legal fees, or
- advertising costs.

These costs should be deducted separately from any other allowable costs.

Allowable costs include:

- the original cost of acquiring the asset
- any incidental costs of acquiring the asset, and
- capital expenditure incurred in enhancing the asset.

Individuals must report any gains they have made via a Self-Assessment tax return.

5.1 The Application of CGT to Different Parties

5.1.1 Individuals

When an individual buys a chargeable asset and disposes of it at a profit, the difference between its acquisition cost and disposal value is taxed as a capital gain.

Individuals pay CGT on their net chargeable gains (that is, the gains they have made less any losses realised) in a relevant tax year, less unrelieved losses brought forward from previous years and the annual exemption.

Individuals are liable to CGT on their disposal of chargeable assets situated anywhere in the world if, for any part of the tax year of disposal, they were either UK resident or ordinarily resident. Their liability may be affected by any international double taxation agreements (see section 7.2).

For each tax year, most UK residents are allowed the use of an annual exemption, called the CGT allowance or annual exempt amount (AEA), up to which no CGT is payable; for 2025–26, this allowance is £3,000. This is a 'use it or lose it' exemption, meaning that no unused element of the exemption from one tax year can be carried forward to the next tax year.

Thereafter, the rate of CGT relating to the disposal of chargeable assets is 18% for basic rate taxpayers and 24% for higher and additional rate taxpayers.

For 2025–26, business asset deposit relief (BADR) reduces the rate of CGT to 14% on all gains on qualifying assets, up to a maximum asset value of £1 million over an individual's lifetime; this rate increases to 18% from 6 April 2026. Once the limit of £1 million has been exceeded, then the normal CGT rate applies. In order to qualify for this relief, an individual has to be a sole trader or business partner of a company that they have owned for at least two years.

5.1.2 Trusts

Generally, any CGT liability falls on the trustees, although there are some exceptions to this rule. For example, if the trust is:

- a settlor-interested trust (ie, the settlor or their spouse/civil partner benefits from the trust), or
- an offshore trust then, any gains may fall to the settlor.

Trusts have an annual CGT exemption, which depends on the type of trust in question. For personal representatives of deceased persons and trustees of certain settlements for vulnerable people, it is the same as for individuals (ie, £3,000). For most others, though, it is half the level for individuals (ie, £1,500). Gains above the allowance are taxed at 24%.

Trustees may be able to further reduce their CGT liabilities by making a claim for BADR. If the trustees are eligible to claim BADR, then any qualifying gains up to the lifetime limit of £1 million will be taxed at the lower rate of 18%, with the balance taxed at 24%.

5.1.3 Charities

A charity is exempt from CGT on any gains when the proceeds of the disposal are applied for, or to be applied for, charitable purposes. Any capital losses that arise in circumstances where a gain would be exempt are not available for relief.

5.2 CGT Calculation

The following example illustrates how CGT is calculated on disposal of a chargeable asset for a basic rate taxpayer.

Proceeds	£25,500	
Cost	(£10,000)	
Net gain	**£15,500**	
Allowance	(£3,000)	
Chargeable gain	**£12,500**	£15,500 – £3,000
Tax @ 18%	£2,250	£12,500 x 18%
Proceeds net of tax	**£23,250**	**£25,500 – £2,250**

Notably, if the owner realised capital losses in a tax year, then those losses must be used first in the year in which they are realised, before applying any portion of the CGT allowance. Any remaining losses that are not used in that specific year can then be carried forward indefinitely.

In subsequent years, when offsetting against capital gains, then the CGT allowance is applied first, and any remaining losses are then used to further reduce the taxable amount. However, losses cannot be carried back against gains made in earlier tax years.

The following demonstrates how a carried forward loss of £15,000 would be used to offset a capital gain:

Proceeds	£25,500	
Cost	(£10,000)	
Net gain	£15,500	
Allowance	(£3,000)	£3,000 + £15,000 = £18,000
Losses carried forward	(£15,000)	
Chargeable gain	**£0**	£15,500 – £3,000 – £12,500
Tax @ 18%	£0	£0 x 18%
Proceeds net of tax	**£25,500**	

Any unused capital losses can be carried forward indefinitely, but they must be offset against capital gains at the earliest opportunity, and individuals are not allowed to offset more than the gain. In this example, only £12,500 of the £15,000 loss has been used, so the remaining £2,500 can be carried forward and used to offset capital gains in future tax years.

5.3 The Capital Gains Tax Treatment of Collective Investments

Learning Objective

5.1.2 Understand the tax treatment within the fund and for UK investors of income and capital gains arising from collective investments: investment trusts; exchange-traded funds; open-ended investment companies (OEICs); unit trusts

5.3.1 Open-Ended Investment Companies (OEICs), Unit Trusts and Exchange-Traded Funds (ETFs)

For simplicity, the text only mentions OEICs, but it also refers to unit trusts and ETFs.

- Capital gains made within an OEIC are exempt from tax.
- Capital gains made by a taxpayer on any disposal of the OEIC may trigger a CGT liability depending on whether they have exceeded their annual CGT exemption. If they make a loss, this may be offset against realised gains made elsewhere. Such losses can be carried forward indefinitely if they have no gains to offset in the year that they dispose of their OEIC holding.

5.3.2 Investment Trusts

- Providing they comply with the relevant rules, investment trusts do not pay CGT on internal gains.
- An investor in an investment trust may be liable to CGT on any gains they make on disposal of it. If they make a loss, it may be offset against gains made elsewhere or it may be carried forward to future years.

5.3.3 Real Estate Investment Trusts (REITs)

- REITs are not subject to CGT on gains made on the disposal of property, providing that they distribute at least 90% of their profits each year to shareholders as dividends.
- Investors disposing of a holding in a REIT may be liable to CGT on any gains made, as for any other shareholding. Losses may be offset or carried forward.

5.4 CGT in Other Countries

Worldwide, capital gains are most often realised from the sale of shares, bonds, real estate, property, and precious metals, when sold at a profit. Some countries, similarly to the UK, also offer exemptions. However, tax rates on gains vary between countries; and while many do not impose CGT on the sale of a principal private residence, this is not always the case.

Given this, individuals must familiarise themselves with the CGT rules in their country of residence.

6. Inheritance Tax (IHT)

Learning Objective

4.5.1 Understand the application of inheritance tax (IHT): chargeable transfers; potentially exempt transfers; transfers on death; nil rate band (NRB); exemptions and reliefs; gifts with reservation; valuation of assets; deed of variation

6.1 The Application of Inheritance Tax

Inheritance tax (IHT) is often thought of as a tax which is levied when someone dies. In fact, this is something of a misnomer, as IHT can apply when assets are transferred in a variety of ways – for example, on death and by gifts. If this were not the case, people would avoid it simply by giving away their assets before they died.

IHT is primarily a tax on wealth. Usually, this means wealth left to someone on the owner's death. However, it also applies to gifts made up to seven years – and, in exceptional cases, up to 14 years – before death and to certain lifetime transfers of wealth (see sections 6.1.6 and 6.1.7).

IHT is different from income tax and CGT:

- For income tax and CGT, the key question is: how much money has the taxpayer made?
- With IHT, the question is: how much have they given away?

It is the amount which the taxpayer has transferred that is taxed. You can also see this as the amount by which they are worse off. Thus, if a taxpayer has to pay IHT on a lifetime gift, they will be worse off by the amount of the gift plus the tax; this must be taken into account when calculating the cost of making this gift.

Most (but not all) assets are included in a deceased person's estate. The most common exemptions are assets transferred to a spouse or civil partner, assets held in trust, and certain types of gifts and transfers made during the individual's lifetime (eg, those made to charities and *bona fide* political parties; see section 6.1.5 for further details). HMRC may also exclude certain assets which they refer to as 'excluded property' from their assessment.

Death benefits and unused pensions are not currently included in the estate for IHT calculations, but a change announced in the Autumn Budget 2024 will include them from April 2027. The most recent HMRC update was a technical consultation published in 2024 on how to implement this change. According to HMRC, the next step will be to publish a response document and conduct a technical consultation on draft legislation in 2025.

6.1.1 Chargeable Transfers

IHT is a tax that arises on any chargeable transfer. A chargeable transfer is any transfer of value made by someone which results in their being worse off (that is, they diminish the total value of their estate) and that is not covered by an exemption.

There are two main chargeable occasions:

- gifts made during the lifetime of the donor (lifetime transfers), and
- gifts or transfers on death – for example, when property is left to someone in a will (the death estate).

The measure of a gift is always the loss to the transferor (the reduction in value of their estate), not the amount gained by the transferee. In most cases these figures will be the same, but not always.

For example, a lifetime transfer to a discretionary trust is a chargeable lifetime transfer (CLT), so is immediately chargeable to IHT at half the lifetime rate (ie, 20%).

The sale of an asset at its open market (arm's length) value will, thus, not give rise to an IHT charge (it might, however, give rise to a CGT charge if the seller makes a gain on the asset).

6.1.2 Chargeable Persons

Individuals and trustees of settled property (trust property) are chargeable persons for IHT purposes – that is, they may be liable to IHT.

All transfers of worldwide assets made by people who are domiciled in the UK (essentially, people who regard the UK as their permanent home), whether during their lifetime or on death, are capable of being liable for IHT. For individuals not domiciled in the UK, only transfers of UK assets are caught within the IHT 'net'.

6.1.3 Potentially Exempt Transfers (PETs)

A lifetime transfer made by an individual to another individual is known as a potentially exempt transfer (PET). A PET is treated as being exempt from IHT when made – and will remain so providing that the transferor survives for at least seven years after the date on which they make the gift. If the transferor dies within seven years of making the gift, it will become chargeable to IHT.

Transfers of wealth into trusts are treated as potentially exempt transfers (PETs), and are therefore excluded from the donor's estate for IHT purposes if they survive seven years from the date of making the transfer.

However, a transfer of wealth into a discretionary trust is deemed to be a chargeable lifetime transfer (CLT) and may be subject to an IHT charge if it causes the individual's IHT allowance to be exceeded at the date the transfer is made.

6.1.4 Transfers on Death

When someone dies, the following steps are taken to establish the IHT due:

Step 1 Look back seven years from the date of death to see if any CLTs have been made. If so, these transfers use up the **nil rate band (NRB)** available for the death estate – the NRB is covered in more detail below. Work out the value of any NRB still available after this exercise.

Step 2 Calculate the gross value of the death estate.

Step 3 Any part of the death estate covered by the NRB is not taxed. Any part of the death estate in excess of the NRB is charged at 40% (or a reduced rate of 36% if more than 10% of the net estate is left to a registered charity). Deduct any relevant reliefs from the death tax (see section 6.1.5).

Step 4 If relevant, divide the tax due between personal representatives, the person in possession of a gift subject to a reservation, and trustees (when applicable).

The Nil Rate Band (NRB)

The nil rate band (NRB) is £325,000 for 2025–26 (frozen until 2025–26); this means that the transfer of assets up to this amount are taxed at 0%, so is effectively IHT-free.

Any unused NRB can be transferred to any surviving spouse or civil partner. Hence, for 2025–26, the survivor will effectively have an allowance of up to £650,000 against IHT. The mechanism for this enhanced allowance is that, on the death of the first spouse/civil partner, the NRB for the surviving spouse/civil partner is increased by the percentage of the first person's unused NRB. This rule applies however long ago the first spouse/civil partner died, but there are special rules if the survivor has remarried. Note that siblings living together are not eligible to transfer their NRB to one another, for example.

Example

An individual dies in 2025–26 and leaves £130,000 to their children and the rest of their estate to their spouse/civil partner. There is no IHT due at that time, and 60% (ie, £195,000 of £325,000) of the NRB is transferred to the surviving spouse/civil partner.

If the survivor were to also die in 2025–26, the first £520,000 (£325,000 + £195,000) of their estate will be exempt from IHT.

There are three rates of IHT which are linked to the prevailing NRB:

- £0 – £325,000 0% (for any cumulative value of transfers).
- Over £325,000 20% (for CLTs, such as into some types of trust).
- Over £325,000 40% (for transfers within seven years prior to death, subject to taper relief).

If at least 10% of the deceased's net estate (ie, the estate's total value less any liabilities, reliefs and exemptions) is left to a registered charity, a reduced rate of 36% applies on death.

Residence Nil Rate Tax Band

An additional NRB called the **residence nil rate band (RNRB)** is available when the individual's main home is passed on death to direct descendants, provided the owner dies on or after 6 April 2017. The RNRB is also available when a person downsizes or ceases to own a home and assets of an equivalent value are passed on death to direct descendants.

The RNRB for 2025–26 is £175,000. Similarly to the NRB, any unused RNRB can be transferred to a surviving spouse or civil partner. However, the RNRB is tapered for estates with a net value over £2 million, by £1 for every £2 over this threshold; hence, estates valued at £2.35 million or above will not benefit from the RNRB.

6.1.5 Exemptions and Reliefs

There are various exemptions available to eliminate or reduce the chargeable amount of a lifetime transfer or property passing on an individual's death:

- Some exemptions apply to both lifetime transfers and property passing on death.
- Other exemptions apply only to lifetime transfers (including PETs becoming chargeable on death within seven years).

Exemptions Applying to Lifetime Transfers Only (including PETs)

Type	Monetary amount (if applicable)	Relevant details
Annual exemption	£3,000 per tax year	• If the whole £3,000 is not used in a tax year, the balance can be carried forward one year only. • If several gifts are made in a year, the exemption is applied to earlier gifts before later gifts.

Type	Monetary amount (if applicable)	Relevant details
Small gifts exemption	Up to £250 to any person in any one tax year	• Can be used as many times as the donor wants, providing it is to different donees. • If a gift totals more than £250, the whole of it is chargeable. • Cannot be used in conjunction with the annual exemption, to give £3,250 to one person. • It cannot apply to gifts into trusts.
Normal expenditure out of income	No limit	• After making the gift, the donor should be able to maintain their standard of living. • The expenditure must be regular or, if the first in a series, clear evidence of an intention must be ongoing. • Can also cover regular payments under deeds of covenant, and the payment of life assurance premiums on a policy for someone else. • Payments must be made out of natural income and not inheritances, lottery winnings, capital from share sales or proceeds from life assurance bonds, for example.
Gifts on marriage or civil partnership	£5,000 per parent; £2,500 per (great-) grandparent; and £1,000 from any other person	• Will only be exempt if it is made on or shortly before the wedding or civil ceremony. • Those made after the date of the wedding or civil ceremony do not apply.
Gifts for education and maintenance	'Reasonable provision'	• Payments are exempt until the child's 18th birthday, or on ending full-time education (if later). • Illegitimate, step- and adopted children are included.

Exemptions Applying to both Lifetime Transfers and Transfers on Death

Type	Monetary amount (if applicable)	Relevant details
Inter-spouse and inter-civil partner transfers	Unlimited if the donee is UK-domiciled (if the donee is non-UK domiciled then a tax charge arises, subject to the IHT limit)	• Partners have to be married or in a civil partnership and not 'common law'. • Transfers are exempt, even if the spouses/ civil partners no longer live together. • The exemption ceases to apply on divorce.

Type	Monetary amount (if applicable)	Relevant details
Gifts to charities	Unlimited	• The charity must be established in the UK and be wholly exempt from IHT. • For individuals who leave at least 10% of their net estate to a registered charity, the IHT rate reduces to 36%.
Gifts to qualifying political parties	Unlimited	• A political party qualifies if they have at least one MP (or two in the House of Commons) and 150,000 votes at the last election before the gift was made.
Gifts for the national benefit	Unlimited	• Eligible recipients include museums, libraries, universities, the National Trust, local authorities and government departments. • Gifts of land to housing associations are exempt. • Maintenance settlements can be made free of IHT if they are for the upkeep of historic property.

Quick Succession Relief (QSR)

QSR aims to prevent the same property being fully chargeable to IHT twice in quick succession when assets have been passed through a CLT within five years of the second death. The relief is given by reducing the tax payable on the second person's estate. The amount of relief given depends on the tax paid on the earlier CLT, the benefit received by the deceased, and the time between the transfer and death.

Business Relief (BR)

Previously called business property relief (BPR), BR is a relief for transfers of business property designed to try to ensure that family businesses (for example) are not crippled by having to pay an IHT bill. BR is only available if the donor owned the property for at least two years before death, and it can be claimed at two rates:

Relief of 100%	Relief of 50%
• Interests in unincorporated businesses, such as sole traders or partnerships. • Shareholdings of any size in unquoted and AIM companies.	• Shares controlling more than 50% of the voting rights in a fully-listed company. • Land, buildings, plant or machinery used wholly or mainly for the purpose of a business controlled by the donor (or if the donor was a partner).

There are some assets that do not qualify for BR. For example, if the business is a not-for-profit (NPO) organisation, it is being sold/wound up (subject to certain conditions), or it consists wholly (or mainly) of dealing in securities, stocks or shares, land or buildings, or making or holding investments. BR also cannot be claimed for relief on assets that:

- also qualify for APR (see below)
- were not used mainly for business in the two years before they were transferred
- are not needed for future use in the business, or
- are subject to a binding contract for sale at the time of the transfer.

Agricultural Property Relief (APR)

This relief is available for the transfer, during lifetime or death, of agricultural property in the UK, Channel Islands, Isle of Man or European Economic Area (EEA). This includes agricultural land, growing crops and farm buildings, but not the animals or equipment.

APR is also claimed at two rates:

Relief of 100%	Relief of 50%
• Owner-occupied farms • Land that is let on a grazing licence. • Property that is let on a tenancy beginning on or after 1 September 1995.	• Interests of landlords in most other let farmland.

The property must have been occupied by the donor for agricultural purposes for the previous two years, or have been owned by the donor for seven years and occupied by someone else for agricultural purposes for that time. As with BR, the relief cannot apply to property that is subject to a binding contract for sale.

If both APR and BR are available, APR is given first.

In the Autumn Budget 2024, the UK government stated that they will be reforming BR and APR from April 2026. In the meantime, the current rates of relief will continue: the first £1 million of combined business and agricultural assets will continue to attract no IHT, and 50% relief (at an effective rate of 20%) for assets over £1 million. Further, for shares in unquoted and AIM companies, the rate of relief will be 50% (not 100%).

6.1.6 Taper Relief and the Seven-Year Rule

When an individual makes a PET within seven years of their death, the amount of IHT due on that PET is reduced, based on when the gift was made. Any gift made within the NRB will be automatically exempt from potential tax charges.

Years Between Transfer and Death	Percentage of Taper Relief Applied	Effective Rate of Tax on Gift
Up to 3	0%	40%
More than 3 but not more than 4	20%	32%
More than 4 but not more than 5	40%	24%
More than 5 but not more than 6	60%	16%
More than 6 but not more than 7	80%	8%
More than 7	100%	0%

The 'percentage of taper relief applied' column shows the amount of relief that applies to IHT on PETs with a combined worth of over £325,000 within seven years of the donor's death. The 'effective rate of tax on gift' column shows the effective rate of IHT that must be applied to the PET.

6.1.7 The 14-Year Rule

While PETs made over seven years ago can be broadly ignored, if an individual made a CLT (eg, a gift to a trust) followed by a PET (eg, a gift to an individual) less than seven years later, and then dies within seven years of making the PET, then both the CLT and subsequent PET fall back into the estate for IHT purposes.

This occurs because the NRB is applied chronologically to the gifts. Until the first seven-year period has expired, then the donor's NRB has not been 'reset' and, therefore, it is not available to offset against the second gift (ie, the failed PET).

It is for this reason that careful estate planning is crucial to ensure efficient use of available exemptions and minimise potential tax liabilities.

6.1.8 Gifts with Reservation

There are rules to stop people from avoiding IHT by making gifts with reservation – that is, incomplete lifetime gifts when the donor continues to enjoy the gifted asset, or gifts with a condition attached. A common example is a donor gifting their home to their children, but the donor continues to live there rent free (note that occasional brief stays in a house given away do not necessarily create a reservation).

Without these rules, people would make incomplete gifts to avoid IHT, effectively making them PETs while also reducing their estate at death. This would allow the value of the assets to potentially escape tax entirely, despite the original owner deriving some benefit from them, possibly right up to their death.

A gift with reservation is treated like any other gift when it is made, either as a PET or a CLT, but special rules apply on the death of the donor. If the reservation still exists at death, then the asset is included in the donor's estate at its value at that time, not at the time the gift was made. If the reservation ends within seven years before death, the gift is treated as a PET made when the reservation ceased, with its value determined at that time; and the annual exemption cannot be applied to this PET's value.

A gift will not be treated as being with reservation if full consideration (ie, payment) is given for any right of occupation or enjoyment retained by the donor – eg, when someone gives away their house but continues to live in it by paying a full market rent. Additionally, if the donor's circumstances change unexpectedly after the gift, and the benefit provided by the donee is solely for reasonable care and maintenance of the donor (such as for an elderly or infirm relative), this exception applies only to interests in land.

Pre-Owned Assets Charge (POAC)

The POAC is also known as the pre-owned assets tax (POAT), although it is not actually a tax in itself. Rather, it is an annual income tax charge imposed on an individual who has given away certain assets – this includes land, buildings, chattels and gifts into settlements (trusts) of intangible assets. The POAC aims to counter schemes that avoid IHT on gifts with reservation.

The charge for land and buildings is based on the rental value. The charge for chattels is calculated by applying a statutory rate of interest to the value of the asset (reduced by any payments made for its use). The charge for intangible assets is calculated by applying a statutory rate of interest to its value, reduced by any CGT payable. There is no charge if the benefit is valued at below £5,000.

Transitional provisions allowed individuals to elect for the POAC not to apply, but this would have had the effect that the property, chattel or intangible asset would be included in the individual's estate for IHT purposes.

6.1.9 Property Valuations

The value of any property for the purposes of IHT is the price which the property might reasonably be expected to fetch if sold in the open market at the time of the transfer.

Quoted Shares and Securities

Valuing quoted shares and securities (including investment trusts) is straightforward. In the UK, the London Stock Exchange's (LSE's) Daily Official List (DOL) provides closing bid and offer prices for all quoted securities. IHT valuations follow the 'quarter up' rule, using the bid (lower) price plus a quarter of the difference between the bid and offer. For example, with a closing price of 300–304p, the IHT valuation is 300 + (304 – 300) / 4 = 301p.

Alternatively, securities can be valued using the marked bargains price, where the average of the highest and lowest marked bargains (excluding those marked at special prices) is taken.

The valuation rule for quoted securities is to take the lower of the quarter up value or this average. If the death occurs on a day where the exchange is closed (eg, a weekend or Bank Holiday), figures from either the previous or next working day can be used.

Valuations for transfers on death must be cum-dividend or cum-interest, including the value of the right to the next dividend or interest payment.

Unit Trusts

Units in unit trusts are valued at the managers' bid price (the lower of the two published prices).

Open-Ended Investment Companies (OEICs)

As OEICs are typically single-priced OEICs, in which cash they are valued at that price for IHT purposes. For those OEICs that are dual-priced, they follow the same rules as for companies and shares, above.

Unquoted Company Shares

There is no easily identifiable open market value for shares in an unquoted company. The shares valuation division of HMRC is the body with which the taxpayer must negotiate. If agreement cannot be reached, appeal lies to the special commissioners and then to the courts.

6.1.10 Life Policies

If a person's estate includes a life policy which matures on their death, the proceeds payable to their personal representatives must be included in their estate for IHT purposes. However, if a person's estate includes a life policy which matures on the death of someone else, the open market value must be included in their estate.

If an individual takes out a policy on their own life, pays some premiums, and then decides to give the policy to someone else by assignment or by declaration of trust, they make a PET.

The value transferred is the greater of:

- the premiums or other consideration paid before the transfer of the policy, and
- the open market value of the policy at the date of transfer.

If an individual writes a policy in trust, assigns a policy or makes a subsequent declaration of trust, the policy proceeds will not be paid to their estate but to the assignee or to the trustees, for the trust beneficiaries. The proceeds will therefore not be included as part of their free estate at death.

It is common to write policies in trust for the benefit of dependants to avoid IHT. In many cases, these transfers will be exempted as normal expenditure out of income.

6.1.11 Deeds of Variation and Disclaimers

Sometimes, an individual will inherit under a valid will or the rules of intestacy (ie, the deceased died without leaving a valid will, which is covered in section 6.2), but want to change the terms. This may be because inheriting directly will give them a tax problem or they want someone else to benefit. In these circumstances, they may be able to use a deed of variation or a disclaimer.

The key difference between the two is that a disclaimer effectively puts the inheritance back into the estate, meaning it will pass to the next eligible beneficiary; while a deed of variation can actually divert property to any person(s) nominated by the individual who inherited under the will.

For a deed of variation or disclaimer to be valid, it must:

- relate to a valid will, intestate estate or a trust
- be signed by all the parties who would have benefited had the variation not been made (all of whom must be over 18 and must be of sound mind)
- be executed within two years of the death of the legator (the person who left the money), and
- not be made for any consideration (ie, no one should have received money or value as encouragement for them to sign).

The deed of variation or disclaimer must also contain a statement to the effect that it is intended that the IHT effect of the variation will be the same as if the deceased had made that variation themselves.

6.1.12 IHT on Transfers Into and/Out of Trusts and IHT on Trust Assets

Learning Objective

4.5.3 Understand the application of IHT to: transfers to trusts; assets held within trusts; transfers out of trusts

The creation of a trust is a transfer of value for IHT purposes: the amount of the gift will be assessed as the reduction in the value of the donor's estate, not necessarily the market value.

We will look at the main types of trust and consider the IHT implications of each one in turn, the rules on which changed drastically under the Finance Act 2006.

Discretionary and Interest in Possession (IIP) Trusts

For discretionary and IIP trusts, there are three elements:

- **Creation of the trust** – this will be a chargeable lifetime transfer (CLT) with tax payable at 20% if it exceeds the settlor's NRB. Some (but not all) trusts may utilise the RNRB. If the settlor dies within seven years, a 40% IHT rate applies.
- **Periodic (or principal) charges** – these arise on every ten-year anniversary of the trust creation and are applied to the trust, not the settlor (regardless of whether they are alive). The charge is 6% of the trust's value (ie, 30% of the 20% current lifetime rate). The settlor's seven-year IHT cumulation and any capital distributions in the prior ten years need to be considered. The assets generally do not form part of a beneficiary's estate, unless trust capital or income is distributed to them.
- **Exit (or proportionate) charge** – this charge applies when capital leaves the trust, taxed at 30% of the effective rate from the trust creation or last periodic charge. If no IHT was due at creation because the amount was within the NRB, there is no exit charge. It is apportioned based on the time since the last periodic charge. If an asset is passed to a beneficiary, it may be included in their own estate and be subject to IHT if the NRB is exceeded.

Bare Trusts

- The creation of a bare trust is a potentially exempt transfer (PET).
- The trust will only be taxable if the settlor dies within seven years.
- If the beneficiary dies, the trust will be included in their estate for IHT purposes.

6.2 Intestacy Rules

Learning Objective

4.5.2 Understand how intestacy rules may apply in England and Wales, and the implications of these rules for estate planning

When a person dies without leaving a valid will, their estate must be shared out according to certain rules, called the rules of intestacy. A person who dies without leaving a will is called an intestate person. Only married/civil partners and some other close relatives can inherit under the rules of intestacy. If someone makes a will but it is not legally valid, the rules of intestacy decide how the estate will be shared out, not the wishes expressed in the will.

The Inheritance and Trustees Powers Act 2014 changed the way in which the assets of people who die without wills are shared between their relatives, and simplifies the previous complex rules.

Married Couples/Civil Partners, With and Without Children

Where a couple is married or in a civil partnership, the intestacy rules differ depending on whether there were surviving issue (ie, children or other direct descendants, such as grandchildren and great-grandchildren) or not.

As shown in the below table, the whole estate passes on intestacy to the surviving spouse/civil partner where there are no children, and simplifies the sharing of assets where the deceased is survived by both a spouse/civil partner and children.

Intestacy Rules	
Where the deceased dies leaving:	
Issue	• Surviving spouse or civil partner entitled to: ◦ statutory legacy of £322,000, which is index-linked (reviewed every five years) ◦ personal chattels ◦ half of the residue absolutely. • Children entitled to remaining half of the residuary estate at 18
No issue	• Surviving spouse or civil partner entitled to whole estate

For these rules to apply, the couple must be married or in a registered civil partnership at the time of death. Divorced couples or those whose civil partnership has legally ended cannot inherit under the intestacy rules. However, partners who have separated informally can still inherit.

Children of the deceased equally share any remaining half over £322,000. Thus, if the estate is worth up to £322,000, the surviving spouse/civil partner inherits entire the estate, and the children inherit nothing.

In the event that a child dies beforehand, leaving children of their own (ie, grandchildren of the deceased), the grandchildren take the share that would have belonged to their parent. This also applies where:

- a parent has children from different relationships
- a parent has children but is not married or has not registered a civil partnership, or
- children are legally adopted children. Stepchildren will receive nothing if there is no will providing for them, unless they have been legally adopted.

Children, and no Surviving Spouse/Civil Partner

If there is no surviving spouse/civil partner, the children of an intestate inherit the whole estate. This applies however much the estate is worth. If there are two or more children, the estate will be divided equally between them. Again, if any have died beforehand, their own children take the share that would have belonged to their parent.

No Surviving Spouse/Civil Partner or Issue

In the event that the intestate dies leaving no surviving spouse/civil partner or issue, then other close relatives inherit.

The order in which they inherit is:

- The parents of the deceased – equally if both living.
- Brothers and sisters of whole blood – equally or to their issue if any have predeceased.
- Brothers and sisters of half-blood – equally or to their issue if any have predeceased.
- Grandparents – equally if more than one living.
- Uncles and aunts of whole blood – equally or to their issue if any have predeceased.
- Uncles and aunts of half-blood – equally or to their issue if any have predeceased.

If there are no surviving relatives, the estate passes to the Duchy of Lancaster or the Duchy of Cornwall (depending on where the deceased lived), known as bona vacantia. The Bona Vacantia Division of the Government Legal Department advertises estates for next of kin to claim their entitlement. If no heirs are found within 12 years from death, the assets are realised and the proceeds are transferred to the Crown or, in some cases, donated to charity. The division handles only solvent estates with net values over £500 once all liabilities have been paid.

6.2.1 Impact of Intestacy Rules on Estate Planning

The rules of intestacy do not necessarily reflect modern times – for example, they do not take consideration of unmarried couples, nor unadopted stepchildren, among others. If an individual does not leave a valid will, then this could result in their loved ones (and those financially dependent on them) not being provided for.

Dying intestate could also have unanticipated tax implications, as only passing assets to a spouse or civil partner is entirely free of IHT. Where assets are passed to any other beneficiaries under the rules of intestacy, any value above the NRB or RNRB is taxed at 40%.

By preparing a valid will during their lifetime, an individual can avoid intestacy. This will also allow them to leave specific gifts to loved ones and friends, and make charitable gifts, among other provisions in accordance with their wishes.

6.3 Estate Administration

We have seen that the distribution of a deceased's assets and liabilities are governed by the laws of succession. Who receives the assets is determined according to the rules of testate and intestate succession, and how they receive them is governed by the rules for the administration of estates.

The administration of a deceased's estate is carried out by one or more personal representatives. These may be either of the following:

- **Executors** – in cases where the deceased left a valid will (died testate). The executors will obtain a grant of probate.
- **Administrators** – where the deceased left no valid will (died intestate). The administrators will obtain letters of administration.

Letters of administration *cum testamento annexo* ('with the will annexed') are needed when a will exists but has some defect that prevents probate being granted.

The personal representatives are responsible for:

- gathering information on the deceased's assets and liabilities, and reporting them to HMRC
- paying any IHT due, based on the estate's net value, and before the estate is distributed
- settling any outstanding income tax liabilities of the deceased, covering income up to the date of death, and
- accounting for tax liabilities arising during the administration period, which runs from the date of death until the residue of the estate is ascertained (note that personal representatives are not entitled to personal allowances or the starting rate tax band).

At the end of the administration period, the residue may pass absolutely to a residuary beneficiary and/or be held in trust under the terms of the deceased's will.

6.4 IHT in Other Countries

Other countries have their own rules relating to (the equivalent of) IHT.

In the EU, for example, member states are not obliged to harmonise their rules on IHT, meaning that two or more countries can impose their taxes in parallel . That said, many member states have adopted mechanisms to avoid double taxation in their domestic laws.

Elsewhere, some countries and jurisdictions do not charge IHT, although other taxes (eg, CGT) may apply instead. While some allow an annual exemption (enabling gifts to be made without any tax implications), others do not. Hence, IHT is a complex area with varying rules, so individuals should seek professional advice in their home country.

7. Residency and Domicile

7.1 Residence and Domicile

Learning Objective

4.6.1 Understand the impact of the rules on residency and domicile and the implications for income tax and CGT

4.6.4 Understand the impact of the rules on residency and domicile on the liability to IHT

7.1.1 Residence

The amount of any UK tax that an individual pays will depend on whether they are deemed to be resident in the UK.

Residence is a short-term concept that reflects where an individual lives.

An individual's residence (and, therefore, their tax position) in the UK will be determined using the statutory residence test (SRT) and is based on three tests, as follows. Each tax year must be considered separately and the tests applied to it in order. Once an individual meets an automatic test, later tests do not have to be considered.

The Automatic Overseas Test

An individual is automatically non-UK resident if they satisfy any of the following:

- **First automatic overseas test** – they were resident in the UK for one or more of the previous three tax years, and they spent fewer than 16 days in the UK in the current tax year.
- **Second automatic overseas test** – they were not resident in the UK for any of the previous three tax years, and they spent fewer than 46 days in the UK in the current tax year.
- **Third automatic overseas test** – they work abroad full-time (averaging at least 35 hours a week) and spent fewer than 91 days in the UK in the tax year, of which fewer than 31 were spent working (either employed or on a self-employed basis).

The definition of work includes incidental duties such as training, reporting duties and travel.

The Automatic UK Test

An individual will be automatically UK resident if either:

- **First automatic UK test** – they spend at least 183 days in the UK in a tax year.
- **Second automatic UK test**
  - If they have (or have had) a home in the UK, they must have had that home for at least 91 consecutive days, of which at least 30 days must fall in the tax year.
  - In addition, they have been present in their UK home for at least 30 days at any time during the tax year (not necessarily consecutive).
  - If they also have (or have had) an overseas home, they were present in that home for fewer than 30 days in the tax year.
- **Third automatic UK test**
  - They work full-time in the UK for any period of 365 days, which falls in the tax year.
  - Of the days in this 365-day period, considering only the days on which they work for more than three hours, at least 75% of those days must have been worked in the UK.
  - There must be at least one day of the 365-day period that they have worked in the UK for more than three hours.

The Sufficient Ties Test (STT)

This broadly determines residency based on a combination of various factors, generally surrounding the time they spend in the UK and the number of ties they have. For example, individuals who have a property or immediate family members in the UK (eg, a spouse/civil partner, children or other dependants), or who spend more time in the UK than in any other country will satisfy the STT.

The number of days an individual spends in the UK per tax year will determine the number of ties required to be considered UK resident for tax, as per the following tables.

UK ties needed if UK resident for one or more of the previous three tax years	
Days Spent in the UK in the Tax Year Under Consideration	**UK Ties Needed**
16–45	All 4
46–90	At least 3
91–120	At least 2
Over 120	At least 1

UK ties needed if not UK resident in any of the previous three tax years	
Days Spent in the UK in the Tax Year Under Consideration	**UK Ties Needed**
46–90	All 4
91–120	At least 3
Over 120	At least 2

Source: GOV.UK[1]

1 GOV.UK, January 2020. RDR3: Statutory Residence Test (SRT) notes. Retrieved from https://www.gov.uk/government/publications/rdr3-statutory-residence-test-srt/guidance-note-for-statutory-residence-test-srt-rdr3 (Accessed: March 2025)

When a person moves in or out of the UK, usually the split-year treatment is applied. This means that the tax year is usually split into two: a non-resident part and a resident part. UK tax is paid on foreign income based on the time the person was living here.

Non-Resident

If an individual does not satisfy any of these tests, they are considered non-resident and, therefore, unlikely to pay UK taxes. However, the actual position can be difficult to determine. In most cases, advice needs to be sought from an appropriate tax specialist.

7.1.2 Domicile

The status of domicile is a more permanent one than that of residence.

Broadly speaking, an individual is domiciled in a country where they have their permanent home. However, an individual can often retain their domicile for the whole of their life, even if they live abroad. Although it is possible to have dual nationality or dual residence, it is not possible to have a dual domicile.

There are four types of domicile that can apply in the UK:

- **Domicile of origin** – this status is acquired at birth, usually from their father. Children of unmarried parents, or those who are born after the death of their father, take on their mother's domicile. Adopted children acquire their domicile from their adopted father, or from their adopted mother if there is no adopted father. Individuals who were adopted by a same sex couple, where the partners' domiciles are different, may wish to seek advice.
- **Domicile of choice** – this status can be established when the individual moves to a new country with the intention of living there permanently. There are no strict rules for acquiring this change of domicile; instead, several factors are taken into account, such as voting in the new country, establishing a business there, or acquiring citizenship or nationality.
- **Domicile of dependency** – following on from the domicile of origin, if the parent acquires a new domicile of choice, then their child (if under the age of 16) also adopts that domicile. Also, women who married prior to 1 January 1974 adopted the domicile of their husband from the date of marriage. For marriages that took place thereafter, this no longer applies.
- **Deemed domicile** – this status applies once an individual has been resident in the UK for 15 out of 20 years, meaning it will apply in their sixteenth year of residence. If the individual leaves the UK and ceases to be resident, they will lose their deemed domicile status after three years.

Specific Measures for Those Born in the UK with a UK Domicile of Origin – Formally Domiciled Residents

From 6 April 2017, people who were born in the UK and have a UK domicile of origin are treated as if they are UK domiciled for tax purpose in two cases: if they live in the UK (ie, are UK resident), or if they later become a resident in the UK after a period living abroad.

There is a special grace period for people who are not yet treated as UK domiciled for IHT purposes; this grace period applies to IHT only, not other taxes. To qualify for the grace period, the person must have been living in the UK for at least one of two tax years before the current year; they will then be treated as UK domiciled for IHT.

The grace period also applies to offshore trust that these individuals may have set up. If the person is a UK resident during the grace period, then the offshore trust could be subject to UK IHT.

7.1.3 The Tax Implications of Residence and Domicile

Broadly speaking, if an individual is classed as a UK resident and UK domiciled (or deemed domiciled), they must pay tax on their earnings and investment income, no matter where in the world that income originated (ie, an arising basis). They may also be liable to CGT on disposals of assets, located anywhere in the world.

If an individual is resident in the UK but is not UK domiciled, and they have foreign income and gains, then the following rules apply:

- **Remittance basis** – for individuals who were taxed under the 'remittance basis', foreign income and gains arising on or before 5 April 2025 will continue to be taxed on that basis.

  The remittance basis is an alternative type of tax, where individuals pay an annual tax charge – called the remittance basis charge (RBC) – in respect of their unremitted foreign income and gains. In doing so, they only pay UK tax on the income and gains that they bring into the UK from overseas; unremitted earnings are not subject to UK tax. In exchange, though, individuals lose their entitlement to UK personal tax allowances for both income tax and CGT.

  The amount of the RBC is based on the number of years that the individual has been UK resident: those who are resident for seven of the previous nine tax years pay £30,000, and for 12 of the previous 14 tax years pay £60,000.

  Individuals with less than £2,000 unremitted foreign income and/or gains automatically qualify for the remittance basis, although they do not have to pay the RBC and they are still entitled to the UK personal tax allowances. However, they still have to pay UK tax on any foreign income and gains they remit.

  For individuals who previously claimed the remittance basis, a new temporary repatriation facility is available where foreign income and gains arose on or before 5 April 2025. This allows them to remit certain foreign income and gains at a reduced rate during a limited three-year period (12% for 2025–26 and 2026–27, and 15% for 2027–28). This includes foreign income and gains in trust structures.

- **New residence-based system** – from 6 April 2025, the domicile-based system has been replaced with a new residence-based one. Under this new system, individuals are 'long-term resident' when they have been resident in the UK for at least 10 out of the last 20 tax years; they then fall in scope for IHT on their non-UK assets, and remain so for between three and ten years after they leave the UK. In relation to trusts, any non-UK assets will be subject to IHT charges at times when the settlor is long-term resident.

  New arrivals to the UK are entitled to 100% relief on their foreign income and gains for the first four years of their tax residence, provided they have not been UK tax resident in any of the previous 10 years.

Example

Amrita is UK resident, UK-domiciled, unmarried and has a taxable estate of £500,000. The first £325,000 is covered by the NRB (so taxed at 0%). This leaves £175,000, to which 40% tax is applied, giving an IHT liability of £70,000 if Amrita were to die in 2025–26.

If Amrita was not long-term resident under the new residence-based regime, her assets would need to be reassessed, as only assets within the UK would be liable to IHT. Say that her non-UK assets are valued at £300,000, then the estate value of her UK assets would be £200,000, which falls within the NRB so her IHT liability is zero.

7.1.4 Residence and Domicile Status in Other Countries

Globally, each country has its own definition of residence and domicile for tax purposes.

Some countries determine tax residency based on the amount of time that an individual spends in the country each year. In the EU, for example, individuals are considered to be tax resident in the country where they spend more than six months of the year in question, although there are no EU-wide rules on the specific criteria for determining tax residency. In China, individuals are considered to be tax resident if they spend 183 days or more in the country, and in Japan if they have lived there for at least a year.

Others, such as the US, automatically treat all US citizens and residents as tax residents, subjecting their worldwide income to taxation regardless of where they reside. Non-citizens or residents may also be treated as tax residents if they meet certain criteria.

7.2 The Use of Double Tax Treaties

Learning Objective

4.6.2 Understand the use of double taxation treaties

As we have seen, an individual's liability to income tax, CGT and IHT may be affected by any double taxation agreements (DTAs). Examples of countries with DTAs include the UK and China, the US and Malta, and India and Japan.

Individuals that are liable to pay income tax on overseas earnings, CGT on the disposal of an asset or IHT on property in a country other than the one they reside in may be able to claim double taxation relief (DTR). As its name suggests, DTR helps to protect individuals from being taxed twice on the same income, capital gain or property. For DTR to apply, the two countries in question must have a DTA between them.

To prevent income, capital gains and foreign property being taxed twice (once by the foreign country and again by the home country), there exist a number of DTAs with most countries of the world, generally stipulating that tax will be imposed only by the country in which the income is earned, the capital gains are realised, or the foreign property is situated respectively.

A list of the current UK tax treaties in force can be viewed on the GOV.UK website[2].

7.3 How Withholding Tax is Applied

Learning Objective

4.6.3 Understand how withholding tax is applied based on: residency; product; tax regime (at source or reclaimable); beneficiary; qualified intermediaries scheme

Withholding tax is a tax deducted by the government in one country, when income earned in that country is paid to someone overseas.

The country from which the payment is made taxes the payment before it leaves that country, by withholding a portion of it to be remitted to the overseas investor. The amount withheld generally ranges between 0% and 40%, depending on the country.

If there is a double tax treaty in effect, it is often possible to reduce the tax withheld, or to reclaim some or all of the money that was withheld. Further, some recipient countries allow the investor to offset the tax withheld against their domestic tax liabilities.

7.3.1 Residence

An individual's tax residence will be important for determining what rates of withholding tax are deducted by the authorities in other countries. For example, the range of DTAs might mean that if they can show that they are UK resident, they will be liable at a lower rate of withholding tax than if they are resident in a country that does not have a DTA.

7.3.2 Product

Different rates of tax are levied on different forms of income. For example, one country might have a DTA with another, setting out that it will apply withholding tax of one rate for dividend income, another for interest income and yet another for royalties.

7.3.3 Tax Regime

Depending on the nature of the withholding taxes deducted in the country of source of any income, and the terms of any DTA, any reduction of withholding taxes may be affected by:

- relief at source (ie, on notification of the investor's status, the withholding tax is reduced or not applied), or
- reclaim (that is, the withholding tax is deducted, but the investor can submit the appropriate paperwork to the tax authorities and reclaim some or all of the sum that was withheld).

2 GOV.UK, July 2014 (last update: January 2024) Tax treaties. Retrieved from https://www.gov.uk/government/collections/tax-treaties (Accessed: March 2025)

7.3.4 Beneficiary

Complications can arise when the entity receiving the overseas income is not the true beneficiary of the investment. In this case, if there are reliefs to be obtained, any DTA should provide that the recipient has a mechanism for reporting to the overseas tax authority on the identity and status of the true beneficiary, and on the relationship between the recipient and the beneficiary, so that an appropriate relief at source/reclaim can be obtained. This could arise if a financial institution holds shares in overseas companies, registered in its client account name, for its customers' benefit, for example. It could also arise if a trustee holds investments for beneficiaries.

7.3.5 Qualified Intermediaries (QI) Regime

The US qualified intermediaries (QI) regime is a regime whereby non-US financial intermediaries (including US branches of non-US entities) who generally hold US assets on behalf of investors are required to obtain documentation from the beneficial owners. This means they can apply the correct level of withholding tax on income (and in certain circumstances, capital gains) generated by the assets.

At the end of each US tax year (which runs from 1 January to 31 December), all income received by the beneficial owners must be reported to the internal revenue service (IRS).

If the financial intermediary chooses to enter into a QI agreement with the IRS and become a QI, these reporting obligations become less onerous: only US persons are reported separately to the IRS (detailing each person's name, taxpayer identification number and income); non-US persons are collectively reported, meaning that person's individual details are not sent to the IRS. Non-US persons for these purposes include overseas corporations that are owned by US persons, and this has been identified as a potential limitation on the effectiveness of the QI regime.

Reportable income broadly includes both dividends and interest income and also includes corporates and individuals. In summary, an offshore (to the US) QI entity whose client is a US person is required to report annually to the IRS on the amount of income, and in certain circumstances capital, that the US person received during the past tax year which, therefore, enables the IRS to police their tax return.

Thus, through the constant obligations of documentation, withholding and reporting, the IRS uses overseas intermediaries to identify and report US persons back to it on an ongoing basis.

8. Stamp Duty

8.1 Stamp Duty and Stamp Duty Reserve Tax on Securities

Learning Objective

4.7.1 Understand the application of stamp duty and stamp duty reserve tax (SDRT) to the purchase of securities, including: company shares; share options; unit trusts and open-ended investment companies (OEICs); government bonds; corporate bonds; exchange-traded funds (ETFs)

Stamp duty and stamp duty reserve tax (SDRT) are types of financial transaction taxes (FTTs) paid on the purchase of certain securities, issued by UK-incorporated companies (or by foreign companies which maintain a share register in the UK).

- **Stamp duty** is the tax payable when there is some paper-based transfer (eg, a stock transfer form).
- **SDRT** is payable when the transfer is affected electronically (eg, on CREST).

Note that Euroclear UK & Ireland is the central securities depository for the UK markets and Irish stocks. More specifically, Euroclear UK & Ireland operates an electronic settlement system, CREST, which settles a vast number of international securities. The company can also physically hold stock certificates on the behalf of customers. By holding securities as well as maintaining an electronic clearing system, CREST can provide for same day clearing of securities transactions if needed. Its overall ability to provide a fast transfer of title for the securities it handles is its most important advantage to investors.

Similar FTTs are levied on specific types of financial transactions worldwide, although the rate and circumstances under which they are charged (if at all) can vary significantly across countries. Even within regions or economic unions, it is inaccurate to assume that the same approach to FTTs applies. In the EU, for example, some member states apply their own FTTs; while proposals for a harmonised EU-wide FTT have been put forward, the European Council has stated that the prospects of reaching an agreement on the matter in the future are limited.

8.1.1 Company Shares

There are two forms of duty that an investor of a share will need to pay. The amount paid will depend on whether it is classified as:

- **Stamp duty** applies to paper transactions (ie, not settled through CREST) where the investor uses a stock transfer form to buy shares. It is 0.5% of the consideration value, rounded up to the nearest £5 for amounts over £1,000; otherwise, no stamp duty is paid.
- **SDRT** is a paperless transaction that is settled through CREST. It is 0.5%, payable on the value of purchases of UK equities; and is rounded up to the nearest penny.

Stamp duty and SDRT are paid by investment trusts, REITs and VCTs when they purchase underlying shares, as well as by investors in the investment trust, REIT and VCT itself. For some years, the Association of Investment Companies (AIC), which is the trade association for the closed-ended sector, has been campaigning for the removal of stamp duty on investment companies to level the playing field' between open-ended and closed-ended funds.

8.1.2 Share Options

Stamp duty is also payable on share options in UK companies, and overseas issuers with a UK register.

8.1.3 Units in Unit Trusts and Shares in OEICs

No stamp duty or SDRT is visibly charged to the buyer of units in a unit trust or shares in an OEIC. However, the unit trust or OEIC pays SDRT on the underlying shares in which it invests.

For dual-priced unit trusts, this charge to stamp duty is taken into account when the price at which the units are sold is set (ie, it is allowed for in the **bid/offer spread**).

On the other hand, OEICs and other single-priced funds can apply a 'swinging price dilution adjustment' to the price at which the shares are sold. This protects existing investors from bearing stamp duty and other costs, thus preventing their shareholding from being diluted.

8.1.4 Government Bonds

There is no stamp duty or SDRT on government bonds.

8.1.5 Corporate Bonds

Generally speaking, there is no stamp duty or SDRT on corporate bonds. However, there is stamp duty or SDRT on convertible loan stocks (that is, corporate bonds that can be converted into shares, whether that conversion right can be exercised either at the time of the purchase, or at a later date).

8.1.6 Exchange-Traded Funds (ETFs)

Stamp duty is not payable on the purchase of exchange-traded funds (ETFs).

8.1.7 Property

There is no stamp duty or SDRT on the purchase of physical property; rather, stamp duty land tax (SDLT) applies – see section 8.2. Stamp duty or SDRT is only payable on the purchase of shares in a property company, for example.

8.2 Stamp Duty Land Tax (SDLT) on Property

Learning Objective

4.7.2 Understand the application of stamp duty land tax (SDLT), including the main reliefs and exemptions, to the purchase of property

While neither stamp duty nor SDRT is due on the purchase of physical property, it is subject to other taxes – stamp duty land tax (SDLT) in England and Northern Ireland, land transaction tax (LTT) in Wales, or land and buildings transaction tax (LBTT) in Scotland. Other countries have their own versions of SDLT.

In certain circumstances, SDLT reliefs and exemptions may be available, which will reduce the amount of tax that individuals pay on their property purchase (if at all).

Examples include the following:

Reliefs	Exemptions
• **First-time buyers' relief –** a reduced rate of SDLT for individuals who have never owned a residential property in the UK or anywhere else in the world. This relief also applies to individuals buying a leasehold residential property through a nominee or bare trustee, including victims of domestic abuse. • **Crown employees** – as we saw in chapter 1, section 4.4.3, non-UK residents buying residential property in England and Northern Ireland have to pay higher SDLT. Relief is available for Crown servants (and their spouse/civil partner) if they are non-UK resident as a result of performing duties for the purposes of their employment. • **Charities buying property for charitable purposes**, provided certain conditions are met. • **Property investment funds** (eg, PAIFs – see chapter 1, section 4.8.3).	• A land or property transfer, where no money or other payment changes hands. • Property is left to an individual in a will. • Property is transferred due to divorce or dissolution of a civil partnership. • An individual uses alternative property financial arrangements (eg, to comply with Shariah law). • Registered providers of social housing, when purchasing property with a public subsidy.

Further details are on the GOV.UK website at https://www.gov.uk/stamp-duty-land-tax/reliefs-and-exemptions.

9. Value-Added Tax (VAT)

Learning Objective

4.8.1 Understand how liability to value added tax (VAT) arises and is charged

Value added tax (VAT) is a tax that is charged by VAT-registered businesses on most goods and services that they provide in the UK to:

- **business customers** – for example a clothing manufacturer adds VAT to the prices it charges a clothes shop, and
- **non-business customers** – members of the public or consumers – for example a hairdressing salon includes VAT in the prices it charges members of the public.

When a VAT-registered business buys goods or services, it can generally reclaim the VAT it has paid. Businesses that are not VAT-registered cannot reclaim the VAT paid when they purchase goods and services.

VAT is also charged on most goods and services that are imported from both EU and non-EU countries – rather than paying import VAT on or soon after those goods arrive at the border, UK businesses can account for it on a VAT return to HMRC. Conversely, goods exported by VAT-registered UK businesses are zero-rated, meaning that VAT is not charged until the goods arrive in the destination country, providing that certain conditions are met.

There are three rates of VAT, depending on the goods or services the business provides: standard (20%), reduced (5%) and zero (0%). Some goods and services are exempt from VAT (see section 9.2) or are outside the VAT system altogether (see section 9.3).

9.1 Registering for VAT

If goods or services provided by a business count as what is known as taxable supplies, they will have to register for VAT if either:

- their turnover for the previous 12 months has exceeded a specific limit, called the VAT threshold (£90,000 for 2025–26), or
- they believe that turnover will soon exceed this limit.

A business can choose to register for VAT if they wish, even if they do not have to.

9.2 Exempt Items

Some items are exempt from VAT by law. Items that are exempt include the following:

- insurance
- providing credit
- education and training, if certain conditions are met

- fundraising events by charities, if certain conditions are met
- membership subscriptions, if certain conditions are met, and
- most services provided by doctors and dentists.

Selling, leasing and letting commercial land and buildings are also exempt from VAT.

9.3 Outside the Scope of VAT

Some items fall outside the scope of the UK's VAT system entirely. They are not considered to be taxable supplies, so no VAT is charged on them.

This includes:

- non-business activities like a hobby – eg, selling stamps from a collection, and
- fees that are fixed by law, known as statutory fees – eg, vehicle MOT tests.

9.4 The Difference between Exempt and Zero-Rated

If zero-rated goods or services are sold, they count as taxable supplies, but do not add any VAT to the selling price as the VAT rate is 0%.

If goods or services are sold that are exempt, VAT is not charged and they are not taxable supplies. This normally means that VAT on expenses cannot be reclaimed.

Generally, a business cannot register for VAT or reclaim the VAT on their purchases if they sell only exempt goods or services. If some exempt goods or services are sold, they may not be able to reclaim the VAT on all of their purchases.

If a business buys and sells only (or mainly) – zero-rated goods or services, they can apply to HMRC to be exempt from registering for VAT. This could make sense if they pay little or no VAT on purchases.

10. Corporation Tax

Learning Objective

4.9.1 Understand how liability to corporation tax (CT) arises and is charged: companies and organisations: trading, non-trading; taxable profits and accounting periods; rates, allowances and reliefs; taxation of franked income

10.1 How Corporation Tax is Charged

Corporation tax (CT) is paid by limited companies, based on their profits. It is not paid by individuals in business as sole traders (the self-employed), who are taxed on their earnings as income. HMRC lays down rules as to how profits must be calculated for this purpose.

CT is usually charged for accounting periods and is usually in line with the company's financial statements (although it may be different in the year that the company starts). A CT period cannot be longer than 12 months – the only exceptions are if the company is in its first year of business, it stops trading, or it is dormant. In these circumstances, should the accounting period cover more than 12 months, then two tax returns will have to be completed.

10.2 Different Rates of Corporation Tax

There are two rates of CT: the main (or standard) rate payable by the vast majority of companies, and a special rate for unit trusts and open-ended investment companies.

For the financial year commencing on 1 April, the rates are as follows:

	2025–26
Small profits rate (companies with profits under £50,000)	19%
Main rate on all profits (companies with profits over £250,000)	25%
Special rate for unit trusts and open-ended investment companies	20%

Companies with profits of £50,000 or less are subject to the small profits rate of 19%, and those with profits over £250,000 are subject to the main rate at 25%. Those with profits between £50,000 and £250,000 pay a tapered tax at the main rate, reduced by a marginal relief, which provides a gradual increase in the effective CT rate.

Different rates apply to companies involved in the exploration for, and the production of oil and gas, known as 'ring-fence companies'. These companies pay a small profits rate of ring-fence corporation tax (RFCT) of 19% on profits up to £50,000 and a main rate of 30% on profits over £250,000 (and, similarly to above, a gradual increase in the CT rate for companies with profits between £50,000 and £250,000).

10.3 Capital Allowances and Reliefs

Companies may be given capital allowances, which is a form of tax allowance on certain purchases or expenses. These allowances enable the company to set such items off, up to a set percentage, against profits before calculating its tax liability – thus, reducing the amount of tax it may have to pay. They may be available on such things as plant and machinery, buildings, and research and development. The rate permitted depends on what the item is.

Reliefs may also be available. In the UK, for example, companies working on innovative projects in science and technology can claim Research and Development (R&D) relief. There are also reliefs for creative industries (CITR), if the company makes profits from theatre, film, television, animation or video games and those making profits from patented inventions (called the Patent Box).

As we saw in section 10.2, marginal relief is also available to ring-fence companies with profits between certain levels.

10.4 Online Sales Tax

While e-commerce allows businesses to sell their goods and services around the world, an increasingly prominent challenge for governments and suppliers surrounds taxation. With traditional 'bricks and mortar' shops, it is easy to verify the location of sellers through concepts such as permanent establishment. In contrast, e-commerce allows businesses to generate revenue without any physical presence. Further, via the likes of eBay and Amazon Marketplace, consumers may themselves sell goods to other consumers, thus making it difficult to determine the identity and location of the end user. All in all, this raises questions as to which jurisdiction(s) the tax should apply and whether any double taxation agreements are in place.

Estimates suggest that governments worldwide are losing billions of dollars of sales tax each year to tax-free internet purchases (although the actual revenue losses are uncertain); therefore, the way in which ecommerce is taxed has become an important issue for countries, businesses, and consumers. While governments are seeking to protect their revenue base, at the same time the taxation of internet goods will raise prices to the consumer, which could ultimately hurt further growth in ecommerce and, in turn, hinder the development of new technologies and the involvement of businesses in the sector.

In the UK, HMRC obligates sellers (wherever they are located) to calculate and collect taxes on their UK sales. The rules seek to make online marketplaces responsible for ensuring their third-party sellers apply VAT on certain transactions.

Alongside this, many governments worldwide have implemented (or are proposing to implement) digital services taxes (DSTs) on the revenues of online businesses, although there is no unified approach. While a global minimum tax rate has been discussed for some time, a consensus on its structure and implementation has not yet been reached.

10.5 The Taxation of Franked Income

It is common for one company to hold shares in another, and therefore to receive dividends from that investee company.

If this happens, tax will (in effect) already have been paid out on that dividend, since the investee company has paid it out of its post-tax profits.

For this reason, the dividend paid to the investor is called franked income. Franked income is free of further tax to the receiving company.

10.6 Corporation Tax in Other Countries

Worldwide, cross-country variation in corporation tax rates is extremely wide, reaching over 50% in some countries but at or near zero in others. With jurisdictions such as Bermuda, the Cayman Islands, Guernsey and Jersey offering a CT rate of zero, these countries provide international and foreign investing advantages, which makes them some of the most popular areas for offshore investing.

In 2022, the OECD released technical guidance aimed at assisting governments in implementing reforms to the international tax system. These reforms – focused on raising CT rates on multinational companies to a minimum of 15% – are designed to address tax challenges arising from the digitalisation of the global economy. Consequently, they ensure coordinated outcomes and greater certainty for businesses. While the change is not expected to eliminate tax competition between countries, the agreement sets out rules that would limit a race to the bottom on tax.

11. Tax Compliance

Learning Objective

4.10.1 Understand how tax is accounted for and an adviser's duties regarding tax compliance, avoidance and evasion

4.10.2 Understand the need to meet international disclosure requirements under FATCA, CRS and MDR

11.1 The Legal Requirements Relating to Confidentiality and Disclosure

Financial advisers have a general professional duty to maintain the confidentiality of their clients' affairs, including in relation to tax matters.

In addition, they are responsible for the safekeeping of data on individuals and their affairs (among other things), which is governed by data protection laws and regulations. Advisers may therefore hold a good deal of sensitive information relating to clients' finances, which should not be disclosed to third parties without proper authority.

In spite of the professional reasons for maintaining confidentiality, there are circumstances in which disclosure of information about clients' affairs is required. The requirement concerns situations in which a financial adviser becomes aware that information held on a client indicates possible breaches of the law. The financial adviser could have disclosure obligations under various pieces of legislation, including the Proceeds of Crime Act (POCA) 2002 in the UK.

Under POCA, it is a criminal offence for anyone working in a regulated financial firm not to report any activity that they suspect, or ought to suspect, involves the proceeds of crime – eg, an act of tax evasion by an individual. The report should be made to the firm's money laundering reporting officer (MLRO), who must then report appropriate cases to the National Crime Agency (NCA).

In the UK, for example, financial advisers' obligations with regard to individuals' personal data are imposed under the Data Protection Act (DPA) 2018 and the UK General Data Protection Regulation (UK GDPR), the latter of which is almost identical to the EU GDPR.

In 2018, the EU-wide GDPR came into effect. These data privacy laws govern the use and privacy of EU citizens' personal data. The GDPR applies to 'personal data', meaning any information relating to an identifiable person who can be directly or indirectly identified, in particular by reference to an identifier, whether it is automated or held in manual filing systems. This definition provides for a wide range of personal identifiers to constitute personal data including name, identification number, location data or online identifier, reflecting changes in both technology and the way organisations collect information about people.

From 2021, following the end of the Brexit transitional period, the UK GDPR came into effect. This, together with the DPA 2018, applies to firms that process only domestic personal data. The EU GDPR also applies to firms offering goods and services to EU residents.

While the UK and EU GDPR are nearly identical with the same data protection rights, principles and obligations, the UK has the independence to review and amend its GDPR framework, so there is the possibility for future divergence between them.

Outside of the UK and EU, data protection laws vary significantly, with some countries having robust frameworks while others lack comprehensive regulations. Many countries, such as Canada and Japan, have their own data protection laws that may align with international standards, offering protections similar to those in the UK and EU. In the US, data protection laws are fragmented, with no comprehensive national law. China imposes strict regulations on the processing of personal data, with stringent rules on cross-border data transfers and government access to data. However, other countries may have minimal or no legal requirements for data protection, which can lead to lower levels of privacy and security for individuals' personal data. Businesses must therefore carefully assess the legal landscape in each country where they operate or transfer data.

11.2 International Disclosure Requirements

Generally, worldwide, it is not illegal for investors to put their money outside their home country. Hiding it is illegal, though, and civil penalties and criminal sanctions can be severe.

The terms 'tax evasion', 'tax avoidance' and 'tax mitigation' are often used interchangeably, but they are not the same:

- **Tax evasion** involves seeking to avoid or reduce tax by failing to disclose one's affairs fully to the tax authorities, or breaching tax rules in other ways so as to evade the payment of tax (the penalties for which can be severe).
- **Tax avoidance** tends to involve the use of specific tax loopholes to legally minimise of tax liabilities (eg, tax havens, and tax shelters such as pensions and ISAs).
- **Tax mitigation** is a way of ensuring that an individual's tax affairs are properly structured so that they do not have to pay more tax than is necessary (eg, the use of allowances and exemptions).

However, caution is necessary with some of the more complex ways of taking advantage of tax rules. The tax authorities may raise objections to schemes whose main objective is tax avoidance.

In today's world of globalisation, individuals and entities work and trade across different countries and tax jurisdictions. Over the last decade, there have been numerous efforts by countries to work towards greater transparency when it comes to reporting transactions and paying taxes, in order to combat tax evasion through offshore funds.

11.2.1 Foreign Account Tax Compliance Act (FATCA) and Common Reporting Standard (CRS)

Implemented in 2014, the Foreign Account Tax Compliance Act (FATCA) is a US law designed to combat tax evasion by US persons/entities that fail to report income earned from offshore investments and paying US tax on that income.

The Common Reporting Standard (CRS) or, in full, the Common Standard on Reporting and Due Diligence for Financial Account Information was developed by the OECD in 2014, at the request of the G8 and the G20. Through the implementation of a global standard for the annual cross-border exchange of information on financial accounts, the CRS, like FATCA, aims to combat tax evasion.

The CRS is broadly based on FATCA but, unlike FATCA (which only requires a financial institution to find US persons), over 100 countries have currently committed to comply with CRS. For this reason, the CRS is often informally referred to as GATCA, or the global version of FATCA.

Notably, the definition of a 'reporting financial institution' under CRS is different to that under FATCA. This means that institutions that are not required to report on financial accounts under FATCA may be required to do so under the CRS. Also, under FATCA, only individual accounts exceeding the reporting threshold (at least $50,000) must be reported, while there is currently no minimum limit under the CRS. This means that the CRS has a much broader scope than FATCA.

11.2.2 Mandatory Disclosure Regime (MDR)

As its name suggests, the MDR requires taxpayers and intermediaries (eg, banks, asset managers, financial advisers, funds, accountants and lawyers) to disclose information to the relevant tax authorities on what may be perceived to be potentially aggressive cross-border tax planning.

Under the MDR, an arrangement will be reportable if it meets at least one of the hallmark categories. A hallmark represents certain typical features of an arrangement that can indicate tax avoidance or abuse of taxes. Based on their features, certain arrangements will need to be reported, while others will not. Notably, the hallmarks are very broadly defined.

Consequently, taxpayers and intermediaries must put policies, procedures and processes in place to identify and capture details of transactions that they may need to disclose. Otherwise, failure to report can result in significant penalties which vary considerably between countries and jurisdictions, and which, in limited cases, include criminal liability.

11.2.3 Penalties for Non-Compliance

A firm's non-compliance with reporting rules could result in significant penalties.

For example, under FATCA, a failure to submit the relevant forms could result in a penalty of $10,000, an additional penalty of up to $50,000 for continued failure to file after IRS notification, and a 40% penalty on an understatement of tax attributable to non-disclosed assets.

With regard to the CRS, the particular penalties can vary, but they often involve heavy fines (ranging from a fixed sum to a percentage of the firm's assets or turnover), and enforcement action (eg, criminal prosecution). Firms may also suffer reputational harm, in turn impacting on their credibility, dependability and customer relationships if this non-compliance is publicly disclosed. Further, the firm may have their rights or licenses revoked/suspended by the regulatory organisation.

From this, we can see why firms need to meet international disclosure requirements.

12. Tax Planning Strategies

12.1 Basic Investment Tax Planning

Learning Objective

4.11.1 Apply the key principles of investment tax planning: use of personal allowances; spouses' and civil partners' personal allowances; children's tax position; pension contributions; use of tax wrappers; use of capital gains tax exemptions; tax deferral; use of life assurance bonds

Tax planning refers to the process of organising one's affairs so as to take best advantage of tax rules.

As discussed in section 11.2, tax avoidance and tax mitigation are perfectly legal.

12.1.1 Use of Personal Allowance, Personal Savings Allowance (PSA) and Dividend Allowance (DA)

The personal allowance enables individuals to earn a certain amount of income each year without it falling within the income tax net. If an individual does not use up their personal allowance in earned income, then unearned (eg, investment) income may fall within this band – see section 1.2.1.

Additionally, individuals have the personal savings allowance (PSA) for savings income and the dividend allowance (DA) for dividend income – see sections 1.2.2 and 1.2.3 respectively.

12.1.2 Spouse or Civil Partner's Personal Allowance, PSA and DA

A married couple and those in civil partnerships are taxed as separate people. If spouses or civil partners jointly own income-generating property, it is assumed that they are entitled to equal shares of the income.

If they are not actually entitled to equal shares in the income-generating property (other than shares in close companies), they may make a joint declaration to HMRC, specifying the proportion to which each is entitled. These proportions are used to tax each of them separately, in respect of income arising on or after the date of the declaration.

If one spouse's or civil partner's marginal rate of tax is higher than the other's, they can choose to transfer income-yielding assets to the individual with the lower rate. If that spouse or civil partner earns no other income, then the income from the transferred asset may thus be entirely tax-free (to the extent of the allowance).

12.1.3 Children's Tax Position

As we saw in section 2.2.4, the law prevents the parent of a minor child from transferring income to that child in order to make use of the child's personal allowance and basic rate tax bands. Income that is directly transferred by the parent, or is derived from capital so transferred, remains income of the parent for tax purposes.

However, this applies only to parents, so tax savings are possible through gifts from other relatives. Even if a parent is involved, the child's income is not treated as the parent's income if it does not exceed £100 a year (or £200 if both parents give money) for 2025–26.

This legislation is concerned with gifts from a parent to a child. It is possible to use the child's personal allowance and starting and basic rate bands if the child is employed in the parent's trade (but it should be remembered that there are rules on the hours which children are allowed to work).

12.1.4 Pension Contributions

Since 'A-Day' (also known as pensions simplification, which took place on 6 April 2006), investors can save up to certain limits into a pension scheme. The rules for claiming tax relief on their pension contributions are more flexible, although tax charges will apply if the individual contributes amounts in excess of certain allowances. This is covered in section 14.5 of chapter 5.

12.1.5 Use of Other Tax Wrappers

The term 'tax wrappers' refers to an account that 'wraps' around savings and investments to offer some protection from tax, provided that the savings and investments remain within these wrappers. The most common examples of tax wrappers are pensions and ISAs.

The use of ISAs as an investment wrapper is particularly important for individuals who wish to limit their capital gains tax (CGT) and income tax liability, while also retaining flexibility and easy access to the savings and investments held within them. While a pension can only be accessed or cashed in according

to the scheme's retirement age, withdrawals can be made from an ISA at any time. There are some exceptions to this, though – eg, lifetime ISAs, which are covered in more detail in chapter 5, section 6.1; along with other types of ISA.

Higher and additional rate taxpayers also benefit from the fact that they have no further tax to pay on interest and dividends earned on savings and investments held within an ISA.

Other wrappers include investment bonds, junior ISAs (JISAs) and child trust funds (CTFs). The individual tax benefits will vary depending on the wrapper used.

12.1.6 Use of CGT Exemptions

Each individual has an annual CGT exemption. An investor with significant investments (outside of tax-free wrappers such as ISAs and pensions) may choose to plan disposals of investments that are subject to CGT so as to make use of the annual exemption, using the rules set out in section 5 of this chapter.

12.1.7 Tax Deferral

Various types of tax planning can be aimed at deferring tax, rather than avoiding it altogether. The benefits of a deferral strategy can be:

- **cash flow** – the money that would have been paid to HMRC stays with the investor for longer, and
- an eventual possibility of legitimate tax avoidance, if the tax becomes payable when the investor has moved to a lower income tax bracket (perhaps because they are no longer earning).

For example, if an investor invests through a collective investment scheme, then the gains made on underlying assets are sheltered within the fund at the point they are realised. The investor is only taxed on the aggregate gains made on the fund as a whole, if and when they eventually come to realise their holding in it.

12.1.8 Use of Life Assurance Bonds

Life assurance bonds can provide the opportunity to combine an element of insurance protection with an investment exposure and some tax-efficiency. For example, an investor may be able to take up to 5% of the value of their policy out on an annual basis, spending it as income, while it is in fact treated as a return of their original capital and, therefore, is not taxed as income in their hands at the time they take it. Importantly, this 5% annual allowance is cumulative, meaning that any unused portion is carried forward and can be added to the following year's 5% allowance – eg, if an investor does not take any withdrawals for three years, then they can withdraw 15%.

12.2 Criteria for Selecting a Tax Planning Strategy

Learning Objective

4.11.2 Analyse the criteria for selecting a tax planning strategy

Any investment strategy should recognise that:

- the after-tax returns from different investments can be affected by tax rules, and
- taxation should therefore be considered when choosing investments and how they are held.

However, favourable tax planning should not be the first priority over and above the choice of investments appropriate to the individual's risk profile and objectives (that is, possible tax savings should not be used as a reason to choose inappropriate investments). In other words, *'the tax tail should not wag the investment dog'*.

It should also be remembered that tax legislation is constantly being reviewed and updated, therefore future changes to taxation rules may render a tax-planning strategy ineffective.

Although not exhaustive, the following points should be considered when selecting a suitable tax planning strategy:

- **What is the client's investment objective (eg, income/growth)? –** It is important to understand the investment objective, to ensure that it is right for the client, so that the tax planning strategy can be developed and implemented accordingly.
- **Have all relevant personal allowances already been claimed (eg, income/capital gains)?** – Where personal allowances are available, the manager should look to utilise these as much as possible, to ensure that the plan agreed with the client is as tax efficient as possible.
- **If a product wrapper is being used for specific tax benefits, what are the conditions for securing and retaining the tax benefit (eg, minimum five-year holding period for VCTs)?** – It is important to understand the terms and conditions of product wrappers, and whether those conditions have been satisfied. The manager can then assess whether those products can be altered without penalty, if need be – for example, if they are no longer be suitable for the client.
- **Are there any ongoing consultations or proposed budget announcements pending that might affect the proposed strategy?** – Changes in government policy can impact a tax planning strategy. For example, while the CGT is £3,000 for 2025–26, it has been reduced over time; this has coincided with a reduction in the dividend allowance. As a result, ISAs have becoming increasingly important (since capital gains and income generated within an ISA are exempt from tax).
- **Are there any anticipated changes to the client's personal circumstances that might affect the strategy in the future, (eg, access requirements)?** – An investment or tax wrapper that is suitable today may not necessarily be suitable in the future, should the client's circumstances change. For example, if a client anticipates a change in their circumstances such that they will need a cash lump sum in the short term (eg, to pay school or university fees), then locking assets into, say, a VCT may not be suitable (on the basis that the client will need to remain invested for at least five years to benefit from tax reliefs).
- **Is input required from other parties (eg, tax specialists/accountants)?** – Tax specialists/accountants may need to get involved if the client's circumstances are particularly complicated, or require specialist knowledge (eg, if the client owns property overseas).

- **Are there any additional reporting requirements on the client's tax return as a result of implementing the strategy?** – Any relevant details of the client's circumstances will need to be completed on their Self-Assessment tax return in order for HMRC to calculate, and for the client to pay, the right amount of tax.

12.3 Common Tax Computations

Learning Objective

4.11.3 Apply the key principles of IHT planning: lifetime gifts; trusts; transferability of nil rate band

4.11.4 Apply common tax computations for: an individual's liability to income tax; CGT liability on share disposals; IHT liability on lifetime transfers and at death

12.3.1 Income Tax

Example

Kalpesh is 38 years old, married with children, and has gross monthly earnings of £5,000 from employment. Calculate his net monthly pay after income tax.

* The annual personal allowance and income tax bands have been divided by 12 to give the monthly amounts for the purposes of this calculation.

		Income Tax
Gross income	£5,000.00	
Personal allowance*	(£1,047.50)	
Taxable income	**£3,952.50**	
Income taxable at basic rate (£0 to £3,141.67)*	£3,141.67 x 20% =	£628.33
Income taxable at higher rate (£3,141.67 to £3,952.50)*	£810.83 x 40% =	£324.33
Total income tax payable	=	**£952.66**
Net monthly pay (after income tax)	£5,000 – £952.66 =	£4,047.34

Please refer to sections 1.1 and 1.2 for the income tax rates, bands and allowances.

Example: Marriage Allowance

In 2025–26, Caroline earns £11,000 and her civil partner, Jemima (a basic rate taxpayer), earns £30,000. As they are both aged in their 60s, Caroline and Jemima are eligible to claim the marriage allowance. Calculate their liability to income tax before and after the marriage allowance has been applied.

Before the Marriage Allowance
Caroline: Earnings are within the personal allowance of £12,570, she will not pay income tax.

Jemima as follows:

		Income Tax
Gross income	£30,000	
Personal allowance*	(£12,570)	
Taxable income	**£17,430**	
Income taxable at basic rate (£0 to £3,141.67)*	£17,430 x 20% =	£3,486

Thus, as a couple, Caroline and Jemima are paying income tax of £3,486.

After the Marriage Allowance
Caroline is able to transfer up to £1,260 of her personal allowance to Jemima. If she were to transfer the full amount, this would reduce her personal allowance to £11,310. Caroline's earnings of £11,000 would still be within the personal allowance, so she may transfer the full amount to Jemima and still not pay income tax.

In doing so, Jemima gets a 'tax credit' on £1,260 of her taxable income.

		Income Tax
Gross income	£30,000	
Personal allowance*	(£12,570)	
Tax credit	(£1,260)	
Taxable income	**£16,170**	
Income taxable at basic rate	£16,170 x 20% =	£3,234

Thus, as a couple, Caroline and Jemima are now paying income tax of £3,234. The application of the marriage allowance has therefore reduced their combined tax bill by £252 for this tax year, (ie, 20% of the marriage allowance).

It is worth noting that net pay may be lower in reality, as the examples here specifically exclude NICs.

12.3.2 CGT Computations

Example

Alex, a basic rate taxpayer, sells their shares worth £120,000. The shares originally cost £100,000. Assuming that Alex has not made any other disposals during the tax year, calculate their liability to CGT for 2025–26.

		CGT
Proceeds	£120,000	
Cost	(£100,000)	
Net gain	**£20,000**	
Allowance	(£3,000)	
Chargeable gain	**£17,000**	
Tax	£3,060	£17,000 x 18%
Proceeds net of tax	**£16,940**	£20,000 – £3,060

Please refer to section 5 for the CGT rates and allowances.

12.3.3 Inheritance Tax

The key principles of IHT planning are:

- gifts during the client's lifetime
- use of trusts
- efficient use of the NRB and RNRB.

Lifetime Gifts

It is possible to make gifts of capital and income, as well as physical assets such as property, during the course of a client's lifetime. This has the effect of reducing the value of the estate for IHT purposes.

The type and circumstances of the gift will determine the tax position at the point that the transfer is made, and on the subsequent death of the person making the transfer. See section 6.1.5 for more details on the IHT exemptions and reliefs that are available.

Example

John is 70 years old, widowed, in good health and has two children, Mary and Paul. John has asked for advice on gifting assets to his family and wishes to mitigate any potential for IHT on death.

John's wife Eve passed away five years ago. Her own NRB was fully used on death, as assets were transferred to Mary and Paul in line with instructions contained in her will. As it currently stands, John's taxable estate is £275,000.

As John made no gifts in the previous tax year, he is able to transfer £3,000 each to Mary and Paul in the current tax year, free of any immediate or future IHT liability. He should aim to use this allowance each year going forward. In addition, John has six grandchildren and is able to transfer £250 to each grandchild each year, thereby reducing his estate by a further £1,500 per tax year.

Taking these gifts into account, the amount of John's estate potentially subject to IHT is immediately reduced to £267,500:

2 x £3,000 gifts to Mary and Paul	£6,000
6 x £250 gifts to grandchildren	£1,500
Total	**£7,500**

Taxable estate before gifts	£275,000
Less total gifts	(£7,500)
Balance	**£267,500**

If John wishes, he could transfer the balance of his estate to his relatives now as a potentially exempt transfer (PET). However, if he dies within seven years of making the transfer, then IHT will be levied on a sliding scale. However, in arriving at a decision as to whether to make a PET and at what value, John also needs to consider his own current and future financial needs.

Please refer to section 6.1 for the IHT rates and nil rate bands.

Use of Trusts

In addition to making transfers of wealth directly to relatives, individuals could also consider setting up a trust and transferring some or all of their wealth into the trust for future distribution to beneficiaries of their choosing.

Remember that the transfer of assets into a relevant property trust created during the settlor's lifetime is a CLT for IHT purposes; IHT is charged at a rate of 20% on the amount of the transfer that is in excess of the unused NRB. Otherwise, it is a PET.

Example

John decides to create a discretionary trust for the benefit of his family using £200,000 of his remaining capital.

As John has made no previous transfers of wealth, the full NRB of £325,000 is available. The gift of £200,000 is less than the available NRB, so John has no immediate charge to IHT.

Transferability of NRBs

Married couples and civil partners can make use of both of their NRBs, by transferring any unused allowance to the other spouse or civil partner. In effect, this means that up to £650,000 of joint assets may be transferred out of the estate on death without incurring a liability to IHT.

Example

Joseph is 65 and married to Wendy who is 63. Their estate consists of a property worth £300,000 and additional assets in savings and investments worth a further £300,000.

Both Joseph and Wendy have the use of their own NRB of £325,000 and, on this basis, do not expect to suffer any charge to IHT on death.

Value of estate on death	£600,000
Total NRBs	**£650,000**
Excess NRB available	£50,000

12.4 Tax Planning of Investments and Pensions

Learning Objective

4.11.5 Apply the above principles to basic recommendations relating to the taxation of investments and pensions

An adviser can take several basic tax planning measures to optimise any client's tax situation. Firstly, they can recommend the use of tax-advantaged accounts (eg, ISAs and pensions), which offer tax deductions, tax-free growth and/or tax-free withdrawals. Advisers can help clients assess their eligibility and contribute to these accounts accordingly.

Other measures may involve the use of tax-managed funds or tax-efficient asset allocation, considering the impact of CGT and income tax on investment decisions, while considering the clients' personal circumstances.

Exploring options such as tax-loss harvesting (whereby an takes losses on investments that have declined in value, to offset the CGT that may be owed on investments that have increased in value) could help to reduce a tax liability.

Further, advisers can provide guidance on the timing of purchases/sales and, where applicable, with regard to the withdrawal of income. By strategically managing these timing considerations, clients can potentially reduce their overall tax burden.

Globally, tax laws and regulations are evolving, so it is essential for advisers to stay informed about changes in this area. Collaboration with tax professionals and accountants may be required to ensure cohesive tax planning.

The following example highlights some of the issues typically encountered when discussing tax planning on investments.

Example

Scenario

Michael and Sarah are married with two children, James and Anne, who are aged eight and six. Michael and Sarah wish to invest a lump sum of £75,000 now in order to contribute towards the cost of their children's future university education. They do not require access to capital in the short term, and wish to invest the money in the most tax-efficient way possible, as they are both 40% taxpayers. Michael and Sarah agree that they want to retain control over the capital.

Analysis

As Michael and Sarah wish to retain control, the investments should be made in their own names, either individually or jointly. As their objective is to provide a capital sum in the future, the investment strategy should focus on capital growth rather than income. As such, any tax liabilities arising from investment returns should be subject to capital gains rather than income tax. The benefit from this approach is that they will be subject to capital gains at the 20% rate rather than income tax at the 40% rate. Also, they will both have use of their annual CGT allowances of £3,000 (2025–26) to offset against the gains, whereas their personal allowances for income tax are already fully used.

Recommendation

Michael and Sarah should both invest their ISA allowances in the current tax year (if they have not already done so). The balance of the capital should be invested in a range of suitable collective investment schemes, as disposal made within the scheme are exempt from CGT; and in their joint names, in order to make use of both CGT allowances.

At the start of each subsequent tax year, sufficient holdings should then be sold within the non-ISA account to fund future ISA subscriptions, while also using some or all of that year's CGT allowances.

Outcome

In this way, the entire capital amount will move to a tax efficient environment over time, while making effective use of both ISA and CGT allowances. The capital remains accessible within the ISAs, and can be used to fund the education costs in the future.

The following example highlights some of the issues typically encountered when discussing tax planning using pensions.

Example

Scenario

Carmel is 42 years old and self-employed. Of her earnings for 2025–26, she would like to invest £70,000, and she would like advice on the most tax-efficient method of investing this for the future. She has an existing portfolio of ISAs and a SIPP, which was used to consolidate various pension arrangements in 2015. She tells you that she has no requirement to access this capital before retirement, and has made no pension contributions since 2019–20. After careful consideration, you assess that Carmel is able to afford this contribution of £70,000 into her investment portfolio, and it will not impact on her standard of living.

Analysis

As Carmel is self-employed, she will be required to declare this payment on her next tax return, and should make provision now for the tax liability.

However, if she instead invests this amount in her SIPP:

- **She will be entitled to tax relief on the whole amount** – she is entitled to contribute the higher of £3,600 or 100% of earnings in a tax year.
- **She will not be subject to the annual allowance charge** – While the contribution is above the annual allowance of £60,000 (2025–26), pension rules allow her to carry forward any unused allowances for the previous three tax years; see chapter 5, section 14.5.

Recommendation

You recommend that Carmel makes a gross contribution to her SIPP in the current tax year using the entire £70,000 and continues to fund ISAs going forward wherever possible.

Outcome

This approach benefits Carmel as she recovers unused pension contribution allowances from previous years and avoids paying income tax on the £70,000. As she has no immediate need for the money, it is now invested in her SIPP and will grow free of tax until she retires. In retirement, Carmel may be able to supplement the income she receives from her SIPP, using capital withdrawals from her ISA portfolio, and position herself so that her taxable income each year is kept as low as possible.

Key Chapter Points

- Employed and self-employed individuals are liable to pay income tax. Some income is received in full, with no tax deducted, while some income has tax deducted at source.
- Various sources of income are aggregated in a personal tax computation. Certain allowances may apply; eg, the personal allowance, the personal savings allowance (PSA) and the dividend allowance (DA) in the UK. These allowances help to reduce the liability to income tax. Some income is exempt from income tax altogether, and is not included in the computation.
- There need to be three things for a capital gain to arise: chargeable person, chargeable disposal and chargeable asset.
- Chargeable persons pay CGT on their net taxable gains in a tax year.
- In the UK, there is an annual exemption for each tax year, called the CGT allowance. For individuals and some types of trust, the allowance is £3,000 (2025–26); and for most types of trust, it is half of this amount (ie, £1,500 for 2025–26).
- Capital losses are deducted against gains in the same tax year, and excess losses are carried forward. In future tax years, the CGT allowance is used to offset gains first, before the carried forward losses are applied. Carried forward losses cannot reduce taxable gains below the CGT allowance.
- Gains on certain assets are exempt from CGT on disposal. Examples include government bonds and qualifying corporate bonds (QCBs).
- IHT is a tax on gifts or transfers of value that is charged on the decrease in a donor's wealth.
- In the UK, the NRB and RNRB help to reduce the potential impact of IHT. For 2025–26, the bands are £325,000 and £175,000 respectively.
- There are rules to prevent someone making a gift with reservation to avoid IHT.
- In the UK, stamp duty and SDRT is payable at 0.5% of the consideration value on specific types of transactions. Stamp duty is charged on paper transfers, rounded up to the nearest £5; and SDRT on electronic transfers, rounded up to the nearest penny.
- Other countries worldwide charge similar financial transaction taxes (FTTs) on specific types of transactions, although the rate itself and the circumstances in which they are charged (if at all) can differ significantly.
- A range of planning vehicles allow for legitimate tax avoidance or deferral.
- There are various tax planning opportunities when an individual's investment strategy is being planned, but tax considerations should not outweigh proper investment planning.

End of Chapter Questions

Think of an answer for each question and refer to the appropriate workbook section for confirmation.

1. **At what rate is dividend income taxed in the UK for 2025–26?**
   Answer reference: Section 1.2.4

2. **Who can claim the marriage allowance?**
   Answer reference: Section 1.2.5

3. **Describe the four main types of trust.**
   Answer reference: Section 2.1

4. **How are equalisation payments on an open-ended fund treated for tax purposes?**
   Answer reference: Section 3.2.1

5. **In the UK, what are the different classes of National Insurance contributions (NICs), and who pays them?**
   Answer reference: Sections 4.1 and 4.2

6. **What is the typical annual capital gains tax (CGT) exemption for a trust?**
   Answer reference: Section 5.1.2

7. **How is a transfer of capital made during a settlor's lifetime to a discretionary trust treated for inheritance tax (IHT) purposes?**
   Answer reference: Section 6.1.1

8. **What is the 'quarter up' rule?**
   Answer reference: Section 6.1.9

9. **In the context of withholding tax, how is an individual's tax residence important?**
   Answer reference: Section 7.3.1

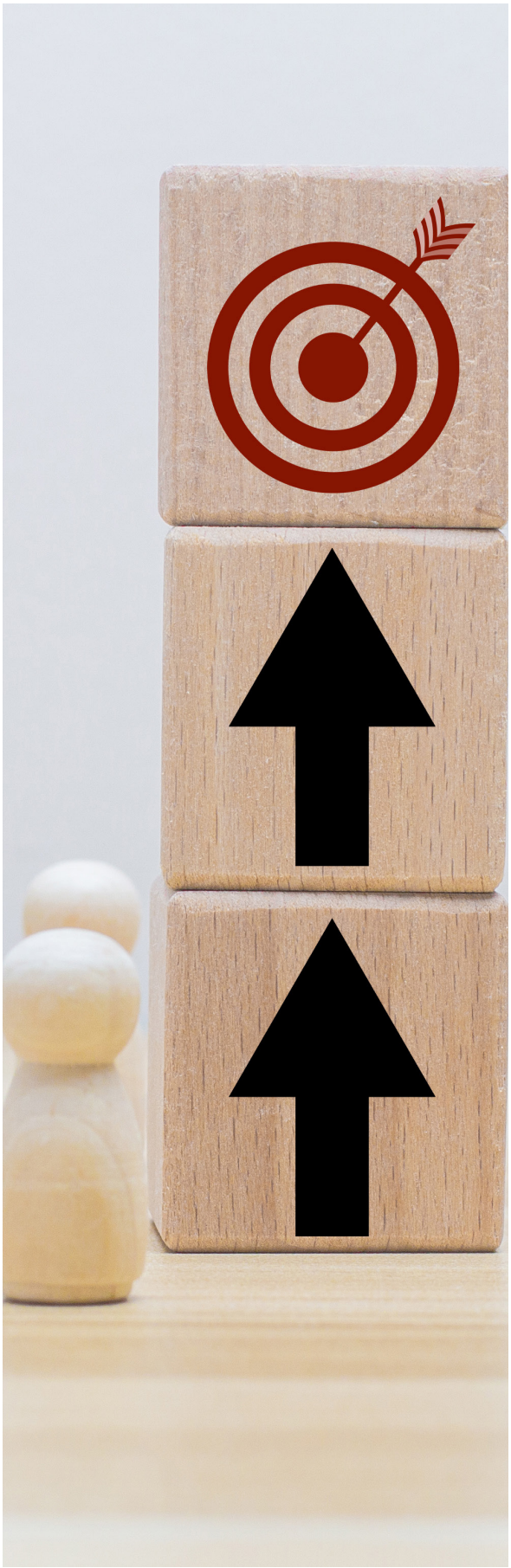
10. **What is the difference between stamp duty and stamp duty reserve tax (SDRT)?**
    Answer reference: Section 8.1.1

Chapter Five

Investment Products

1. Types and Purposes of Collective Investment 371
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This syllabus area will provide approximately 13 of the 80 examination questions



1. Types and Purposes of Collective Investment

Learning Objective

5.1.1 Understand the main types, purposes, common investment characteristics and behaviours of funds, collectives and other products

1.1 Open-Ended and Closed-Ended Funds

Collective investment schemes (also known as 'collectives', 'CISs' for short or 'pooled investments') are investment vehicles that aggregate sums of money from many investors, spread across many investments, and managed by a professional manager.

The term 'collective investment scheme' is internationally recognised, but CISs go by different names depending on their regulatory structure and domicile – for example, unit trusts and open-ended investment companies (OEICs) in the UK, *Fonds Commun de Placement* (FCPs) and *Société d'Investissement à Capital Variable* (SICAVs) in Europe; and mutual funds in the US.

Investors who are less experienced and/or with smaller balances, as well as busy professionals, gain from the professional delivery of services in a managed fund by professionals, who have expertise in money management to deliver the superior skills sought by investors. CISs can also provide access to markets that are harder to reach (such as smaller companies and emerging markets). In addition to the benefits of pooling enjoyed by a large fund, there can be economies of scale, such as lower transaction costs and commissions.

In compensation for this professional management, the investor will have to pay annual management and/or marketing fees, and perhaps also an entry or exit fee, among others. Investors need to carefully consider all the relevant costs to the fund before making an investment decision, as these costs will ultimately impact on the return that they receive from each investment. Given that CISs are regulated investments, all of the information about each fund is available to the investing public and detailed in the fund's prospectus and on the manager's website.

CISs are generally classified by the type of asset classes or principal types of investments that make up the fund. For example:

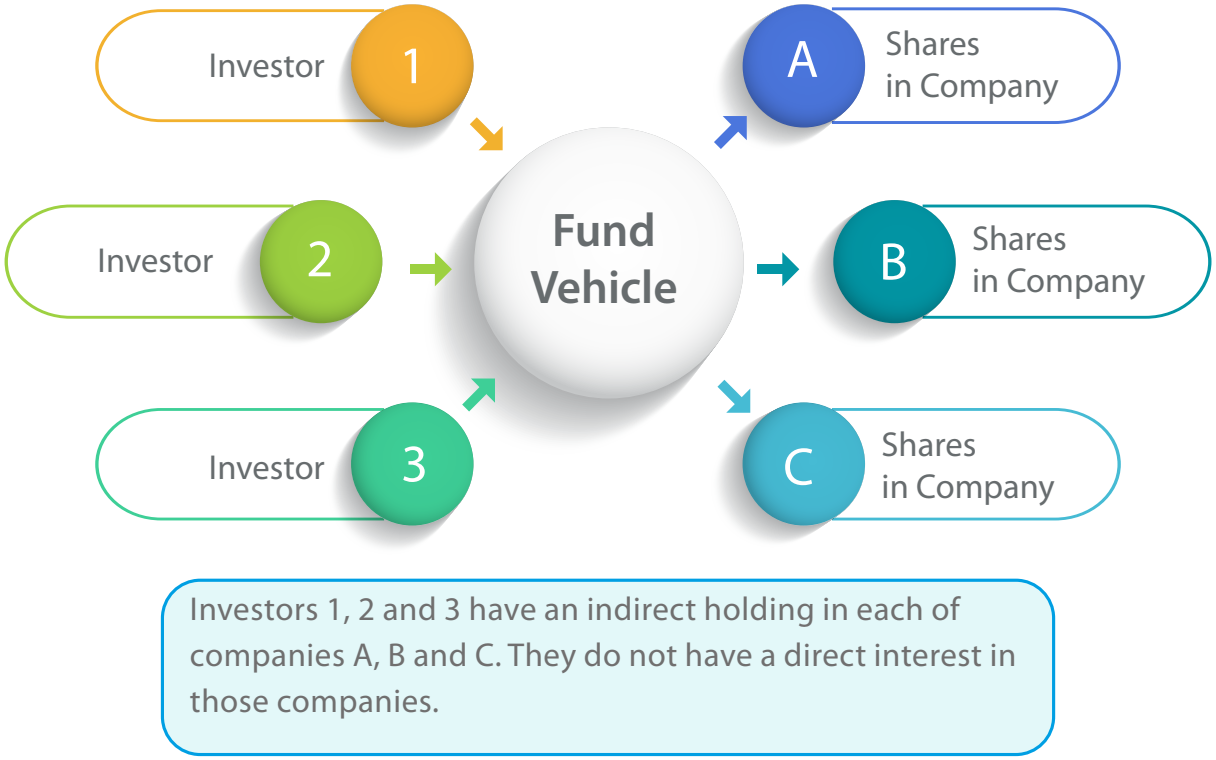
- **Money market** – these funds invest in money market instruments, so are suitable for investors who seek high-quality, liquid, short-term investments as alternatives to bank savings accounts. Unlike savings accounts, in the event of a financial intermediary (FI) default, money market funds do not offer the same level of guarantees.
- **Fixed income** – these funds invest in bonds. They may be classified into maturities (eg, short, medium or long), issuer type (government/sovereign and corporates), credit quality (investment grade and high yield), market (developed and emerging markets), and so on. Further, some funds have specific exposure to one country's currency, or an international composition.
- **Equity** – these funds may be domestic or international in nature, focusing on a single country/region or they may be truly global (ie, world equity funds). If the fund focuses on a single country, it may be further subdivided into industry sector funds. Style-based equity funds are also popular offering investors the option to match their risk exposure preferences to small, middle-sized or large companies, and growth or value stocks.
- **Property** – these funds invest in physical properties, the shares of listed property companies, or a combination of the two:
  - Many residential property funds invest in REITs that specialise in various types of residential dwelling units such as apartment buildings and student housing.
  - Commercial property funds can be divided into three types: retail (eg, superstores, shopping malls and traditional 'bricks and mortar' high street stores), offices and industrial (eg, warehouses).
  - Agricultural property funds invest primarily in agricultural property or land.

  A wide range of options is available, from global property funds to those focusing on a specific country.
- **Hybrid funds** – these funds can offer many variations on the themes covered in the above points. Normally, these types are presented in bond/equity compositions. There are hundreds of different types of fund products available in the market, with each fund aiming to capture a set of risk exposures that will meet their clients' needs and enable that fund to improve its performance over time.

A majority of CISs are open-ended funds. In some countries, open-ended funds can also be set up as partnerships or as purely contractual arrangements.

Open-ended funds do not trade on organised exchanges; instead, investors buy their units (eg, in a unit trust) or shares (eg, in an OEIC) from, and sell them back to, the fund itself. This structure allows new investors to buy into the underlying investment scheme without needing to find a matching seller. There is no trading between individual investors.

- When an investor buys units/shares, the fund issues new units/shares to fulfil the order.
- As the fund grows, the manager issues new units/shares. There is no limit on the number of units/shares that can be issued to meet investor demand.
- When investors want to liquidate their holdings, the fund will buy back the units/shares from the seller.



Units/shares in an open-ended fund are traded at the quoted net asset value (NAV); ie, the total value of a fund's assets, less its liabilities. The NAV is typically calculated at least once a day (although for some funds, it is calculated less infrequently such as weekly or monthly), and represents the value of the underlying securities that are contained in each unit/share.

Thus, the total size of the CIS will vary depending on:

- the amount of money invested by all investors at the inception of the fund
- any further injections of new money or net redemptions of units/shares made by investors while the fund is operational, and
- performance of the underlying investments in the fund.

Example

Fund ABC has a portfolio valued at £1 million of assets under management (AUM). It is made up of 1,000,000 shares in Fund ABC.

Therefore, the (NAV) per share is £1 (ie, £1,000,000/1,000,000) for each of Fund ABC's outstanding shares.

A new investor has £100,000 to invest. How many shares of the ABC Fund will this buy them?

Shares are priced at £1 each so it will buy the investor 100,000 shares in the fund.

Two things happen to the fund:

1. It gains £100,000 in assets.
2. 100,000 more shares are created to give the investor their holding.

The number of shares in the fund is therefore the original 1million, plus 100,000 new shares issued, to give 1,100,000 shares.

The assets of the fund are: £1 million + £100,000 = £1.1 million.

The NAV per share is, therefore, £1.1 million / 1.1 million = £1 per share (ie, unchanged by the introduction of a new investor).

Exchange-traded products (ETPs) are another type of open-ended fund that, unlike unit trusts and OEICs, are listed and traded on the stock exchange, just like company shares. ETPs hold assets such as stocks or bonds, and they trade at approximately the same price as the NAV of its underlying assets over the course of the trading day. ETPs have continuous real-time pricing so investors can trade at any time.

ETPs are often referred to as 'passive' funds, in that they aim to track the performance of a market index or pool of investments (unlikely 'active' funds, which attempt to beat the index) – thus, they generally have low expense ratios. Additionally, no initial or exit charges are applied; instead, the investor pays normal dealing commissions to their stockbroker. Note that while most ETPs are passive, however, some are active.

The other type of CIS is closed-end funds (eg, investment trusts), so called because they do not accept any new money or redemptions while the fund is being managed. Closed-ended funds operate with a fixed number of shares outstanding (while they can issue new shares, this is not undertaken regularly); these shares are issued to the public when the fund makes its debut in an initial public offering (IPO) and, thereafter, they are listed on a regulated exchange, just like company shares. Thus, the price will move in response to supply and demand. A closed-ended company is in many respects both a common stock (issued on the fund company and listed on a stock exchange) and an investment company offering opportunities for indirect investment.

Whichever type of fund an investor holds, the value will depend on the performance of the underlying securities in the fund, as well as the supply and demand for the shares from investors. As a result, each investor has a direct investment in the fund; however, the investor is not a direct holder of the underlying securities in that fund (ie, they are an indirect holder).

Some of the advantages and disadvantages of using funds are as follows:

Advantages	Disadvantages
• **Liquidity** – generally, investors can quickly convert their funds into cash because CISs can be sold at any time and in any amount (that is, providing the underlying securities are themselves liquid) and there are no penalties for early redemptions. • **Access to large denomination securities** – by pooling their money with other investors, small investors can access large securities with a small amount of money. • **Diversification benefits** – risk is reduced by investing in a diversified portfolio (the extent of risk reduction will depend on how diversified the fund is). • **Cost benefits** – larger trades reduce transaction costs, lowering overall expenses. • **Managerial expertise** – professional managers provide access to extensive research, local market knowledge and expert portfolio management.	• **Fees** – fund managers typically charge management fees. There may be additional costs such as performance or transaction fees, which can erode returns over time. • **Lack of control** – investors have limited control over specific investment decisions as the manager makes the choices on their behalf. • **Performance risk** – there is no guarantee that the fund will perform well, and past performance is not indicative of future results. • **Liquidity risk** – there may be delays in redemption or difficulty selling during market stress. This is particularly pronounced with funds investing in illiquid assets, • **Dilution of returns** – in a diversified fund, performance of any single investment may not significantly impact overall return.

New and innovative products continue to be developed to adapt to changes in the market and to meet the growing needs of investors.

2. Open-Ended Funds

2.1 Unit Trusts

As the name suggests, unit trusts are constituted as trusts; that is, they have a trust deed and the fund's assets are held by a trustee on behalf of the beneficiaries (investors). Each unit trust will have a manager who makes the investment decisions and who must be independent of the trustee. The way in which the fund operates is set out in a trust deed.

In the UK, unit trusts that are authorised by the FCA – called authorised unit trusts (AUTs) – can be marketed direct to the public. To obtain authorisation, they have to meet certain rules, both in their set-up and day-to-day management.

These rules include:

- how the unit trust is set up and the contents of its constitutional documents (ie, the trust deed)
- the types of investment a unit trust can hold
- the fact that these investments must meet certain rules in terms of their liquidity and ease of valuation/trading (eg, the types of markets on which they must be listed and the maximum that may be invested in unlisted investments), and
- the maximum amount that can be held in the securities issued by any one issuer (thus ensuring that the fund limits its exposure to a single issuer).

The rules are intended to protect investors in unit trusts to improve their safety relative to less diversified and liquid investments.

AUTs are subject to regulation, so are often regarded as a safe investment from the point of view of governance and investor protection.

Broadly, most unit trusts have two unit classes: income (or Inc, where all income produced by the underlying investments is paid out to the unitholder on a regular basis), and accumulation (or Acc, where income is instead reinvested within the fund). Distributions for both income and accumulation units are liable for income tax. The income tax treatment of the distributions depends on how the unit trust is invested – see chapter 4, section 3.2.1.

The most common form of unit trust pricing is dual pricing or bid/offer (also called bid/ask), where the bid price is the price at which an investor is willing to buy units, and the offer (or ask) price is the price at which they are willing to sell.

2.2 Open-Ended Investment Companies (OEICs)

Open-ended investment companies (OEICs) are also described as investment companies with variable capital (ICVCs). The structure is relatively new to the UK, although they have been available for many years in Europe, where they are called SICAVs (*Société d'Investissement à Capital Variable*), and they are similar to open-ended mutual funds in the US.

While an OEIC has many features in common with a unit trust, the legal structure is that of a company, not a trust. The OEIC is constituted by an instrument of incorporation (instead of a trust deed), and the OEIC has shareholders and a board of directors. Hence, OEICs issue shares, not units.

For UK-authorised OEICs, management is carried out by the **authorised corporate director (ACD)** instead of a manager (this function is still carried out by a manager in most offshore jurisdictions, however). The ACD is also responsible for creating and redeeming shares in the OEIC when investors buy and sell. In addition, the role of the trustee is replaced by a custodian, although the custodian carries out much the same activities, holding and safeguarding the assets, and checking that the fund is being run in accordance with the rules.

Like unit trusts, many OEICs have income and accumulation share classes. Being companies, OEICs pay dividends (not distributions) which again are subject to income tax regardless of whether they are paid out or not. The income tax treatment of the distributions depends on how the OEIC is invested – see chapter 4, section 3.2.1.

2.3 SICAVs and FCPs

SICAVs are commonly used in many European countries, such as Luxembourg and France – but UK investors may come across them as the institutions that sell them may be permitted to market them in the UK, since they can be established to comply with UCITS requirements (see section 2.6). A SICAV is an open-ended scheme, like an AUT or an OEIC, and is established as a company.

FCPs are, like SICAVs, commonly established open-ended collective investment vehicles in Europe (typically France and Luxembourg).

They are established by way of contract rather than as a trust or a company. In other respects, they are very similar to the UK's unit trust or OEIC vehicles.

2.4 Dublin-based ICVCs

The Irish OEIC is very similar to the UK OEIC, and also the Luxembourg SICAV. The fund will have a board of directors and may have a separate management company, either of which must be based in Ireland in order for the fund to be UCITS-compliant.

2.5 Exchange-Traded Products (ETPs)

Learning Objective

5.2.1 Understand the main types, purposes, underlying structure, common investment characteristics of: exchange-traded funds (ETFs); exchange-traded commodities (ETCs)

5.2.2 Analyse the relative merits and limitations of investing in exchange-traded funds (ETFs) and exchange-traded commodities (ETCs) compared with other forms of direct and indirect investment, in terms of: risk; return; physical versus synthetic; tax treatment; turnover, liquidity and access; expenses – transaction and ongoing; management and administration

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Exchange-traded products (ETPs) are another type of open-ended fund that, unlike unit trusts and OEICs, are listed and traded on the stock exchange, just like company shares.

Many ETPs aim to track the performance of a market index, currency or commodity; or a pool of investments (unlike 'active' funds, which attempt to beat the index). Among the different kinds of ETPs, the best-known are:

- **exchange-traded funds (ETFs)** – which are typically passively managed, aiming to track the performance of a particular market index, and
- **exchange-traded commodities (ETCs)** – which aim to track the performance of a commodity or index of commodities.

Hence, ETPs are referred to as 'passive' funds, and the costs involved within them are exceptionally low (both in absolute terms and relative to other collective investment schemes). No initial or exit charges applied; instead, much of the expense of the investment process is external to the fund (eg, broker commission). Since most ETPs are registered offshore, an investor will not be liable to pay stamp duty under current regulations.

What sets ETPs apart from other types of index-tracking fund is that they are listed and traded on a stock exchange and they have prices quoted in real time (ie, throughout trading hours), so investors can trade at any time. Essentially, therefore, an ETP offers the convenience of a stock combined with the diversification that comes with a pooled fund.

Physical versus Synthetic ETPs

In tracking the performance of an index, ETPs may take two forms: physical and synthetic. Although both track the performance of an underlying asset (or a basket of assets) or benchmark, it is necessary to understand the difference between them:

- **Physical ETPs** own the underlying assets. Although physical ETPs may imply greater security, the low margins earned by most ETP providers have led to an increase in stock-lending activities when the ETP lends out its underlying assets to counterparties in exchange for a fee. These fees represent an additional return to the ETP, which is then shared between the provider and the investor, thereby boosting the return for all.

  However, stock lending introduces counterparty and collateral risks. Failure of the counterparty affects the ability of the ETP to recover the stock that has been lent. The ETP would then be forced to call on collateral offered by the counterparty to access capital equal to the value of the securities borrowed. If collateral quality is poor or illiquid, investor capital may be at risk.

- **Synthetic ETPs** do not own the underlying assets, but rather, they gain their exposure using derivative contracts (eg, total return swaps), which they negotiate with third-party investment banks or counterparties. Synthetic ETPs tend to have a higher tracking error than physical ETPs, often due to factors such as differences between the derivatives and spot markets, as well as timing mismatches between index strikes and market movements.

  The ETP provider uses investors' cash to purchase assets and create a collateral basket. It then offers the return earned on this collateral to the counterparty in exchange for a payment equal to the return achieved by the assets that it wishes to track. This strategy presents two risks to investors: the ability of the third party to fulfil its financial obligations, and the quality of the collateral held in the basket.

  Again, failure of the counterparty would affect its ability to make the required payments to the ETP, while holding poor quality or illiquid assets as collateral could prevent the ETP provider from returning capital to investors.

Whichever form the ETP takes, portfolio turnover (a percentage that demonstrates how often the assets within a fund are replaced in a year) is low, since ETPs only add or remove assets from the fund when there is a change to the underlying basket. Generally speaking, an ETP (among other passively managed funds) should have a turnover ratio no higher than about 20–30% (ie, an average holding period of about three to five years), as this suggests a 'buy and hold' strategy.

Creating an ETP

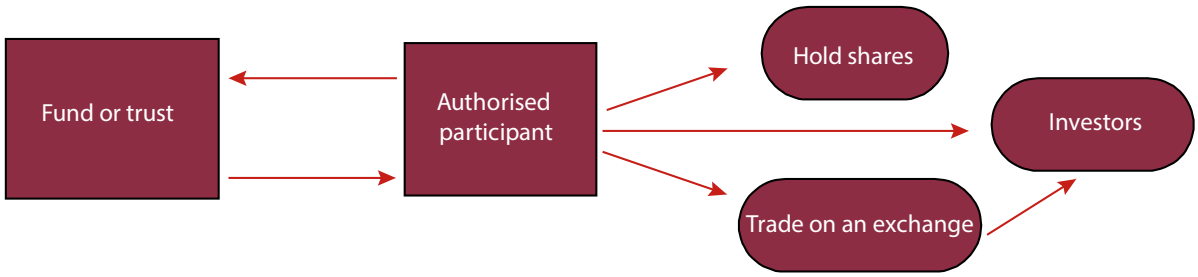
ETPs are equally available to all investors, which is to say both smaller individual (retail) investors and large institutions (institutional investors – eg, hedge funds and pension funds) for a wide range of investment strategies. This includes the construction of core/satellite portfolios, asset allocation and hedging. That said, ETPs are investment products created by institutional investors.

ETP shares are created when an investor (called an authorised participant) deposits a daily 'creation basket' (or cash) with the ETP:

- An **authorised participant** is typically a large institutional investor, such as a broker-dealer, that enters into a contract with an ETP to allow it to create or redeem shares directly with the fund. The authorised participant does not receive compensation from the ETP, or the ETP sponsor, for creating or redeeming ETP shares.
- A **creation basket** is a specific list of names and quantities of securities or other assets that may be exchanged for shares of the ETP. The creation basket typically either mirrors the ETP's portfolio or contains a representative sample of it. The contents of the creation basket are made publicly available on a daily basis.

ETP shares may be redeemed through the reverse of the creation process – in other words, an authorised participant presents the specified number of ETP shares to the ETP in exchange for a 'redemption basket' of assets, cash, or both, which typically mirrors the creation basket.

The mechanism for creating new and redeeming old shares prevents sustained premiums and discounts from occurring.



Essentially, ETPs are a form of depository receipt that give investors a pro rata claim on the underlying assets held on deposit by a FI that has issued the certificate. The portfolio of assets created for the ETP by the FI is placed in a trust, on which a series of creation units are issued and later sold off as shares enabling investors to hold a claim to the underlying securities.

Structure of an ETP

In terms of the underlying structure of an ETP, let us first examine the role of the ETP, the large institutional investor and creation units.

Assume that we wish to create an ETF that is an MSCI ACWI tracker. First, an institutional investor will deposit a basket of their transferable securities with an ETF. This basket of securities will represent part or a whole portion of stocks coming from the MSCI ACWI. Other institutional investors will also deposit their securities until the scope of this ETP is broad enough to mirror the composition of the MSCI ACWI index.

In exchange for the basket of securities deposited by the institutional investors, the ETP will provide to each institutional investor depository receipts in the form of a large block of creation units written under the ETP's name. Each creation unit's performance will effectively mimic the performance of the basket of securities the large investor has placed in trust with the ETF (the MSCI ACWI index in our example).

Next, let us look at the role of the creation unit and an ETP share in the secondary market. Some or all of the ETP's creation units that the institutional investor holds are then sold off on the stock exchange in secondary market trades as ETP shares. This permits other investors to have opportunities to purchase individual ETP shares that represent a *pro rata* ownership of the underlying assets that the ETP company holds in trust.

Investors who want to sell their ETP shares have two options:

1. sell their shares to other investors in the secondary market for cash, or
2. sell the creation units back to the ETP.

Institutional investors who wish to redeem their creation units will not receive cash; instead, they will get back their entitlement to the pool of underlying basket of assets held by the ETP on a *pro rata* basis. Institutional investors can acquire more creation shares if they want by depositing more securities with the ETP.

Like any other investment company, ETPs will have a prospectus in which all relevant shareholder information is disclosed. Investors who purchase creation shares will receive a prospectus. Before purchasing shares in an ETP, investors should carefully study all available information on that ETP.

Benefits and Limitations of Passive ETPs

Benefits	Limitations
ETPs have exceptionally low costs (eg, no initial or exit charges, and no stamp duty). Trading is minimal (ie, portfolio turnover is low), which results in lower expense ratios. Continuous real-time pricing throughout trading hours means that investors can trade at any time, hence they are very liquid. ETPs are very transparent, as it is always clear which assets are held in the underlying index. Some ETPs employ leverage, in an effort to amplify the return of the benchmark (typically 2x or 3x exposure to the index). The structure of ETPs means that they are typically more tax efficient than other types of pooled fund, thus making them popular with tax-sensitive investors.	When the ETP portfolio is adjusted to reflect constituent changes, investors may end up buying (or selling) assets at elevated (or depressed) prices. Cash drag and internal costs can affect performance relative to the index ('tracking error'). ETPs are unlikely to employ any risk management strategies (eg, increasing the cash weighting), so they can never outperform the index that they follow. ETPs are still exposed to market risk so will likely follow the index down in bear markets. For leveraged ETPs, losses will be amplified, so they may not be suitable for more risk averse investors. Buy and sell decisions are based on the underlying index, not research.

2.5.1 Exchange-Traded Funds (ETFs)

ETFs are a relatively new type of open-ended fund, having been in existence in the US since 1993 and in the UK and Europe since 1999. They have proved popular because of their transparency, liquidity and lower expense ratios.

Many ETFs are passively managed, so they aim to track the performance of a specified index. That said, some ETFs are actively managed. Actively managed ETFs have many of the same benefits as traditional ETFs (eg, price transparency, liquidity and lower expense ratios); however, the manager can adapt the underlying portfolio to changing market conditions.

For passively managed ETFs, an increasing range of ETFs is available, tracking a variety of indices. For example, general share price indices (eg, FTSE 100, MSCI China) and sector- and theme-specific indices (eg, technology, utilities). Some track actively managed indices. The details of the ETF's holdings are thus transparent, so their NAV can be readily calculated. The liquidity of an ETF relates to the liquidity of the underlying basket of shares.

2.5.2 Exchange-Traded Commodities (ETCs)

ETCs aim to track the performance of an underlying commodity or basket of commodities.

ETCs and commodity ETFs are both traded on the stock exchange. As they are generally registered offshore, trades in ETCs are exempt from stamp duty. In addition, dealing costs are low in comparison with similar types of investment products. Further, they can be bought within an ISA and other tax wrappers, in which case any gains and income that investors receive are tax-free.

While the terms 'commodity ETF' and 'ETC' are used interchangeably, there are structural differences between the two:

- ETCs typically track one single commodity or commodity index. They allow investors to gain exposure to specific commodities that may typically be difficult to access, particularly without buying futures and options (which are more complicated instruments) or the physical commodity. Thus, ETCs have a share price that moves with the spot or futures price of the underlying commodity.
- In contrast, commodity ETFs enable investors to gain exposure to different commodities or baskets of commodities. To do so, they either buy and sell the underlying commodities that the ETF is aiming to track, futures contracts on the underlying commodities, or the shares of commodity companies.

2.6 Regulatory Frameworks: UCITS and PRIIPs

2.6.1 UCITS

Undertakings in Collective Investments in Transferable Securities (UCITS) schemes were established and authorised under a harmonised EU framework under an EU UCITS Directive in 1985. Initially, they were designed as an open-ended diversified product available to all types of investors, offering investment in permitted classes with high levels of liquidity and borrowing restrictions that were backed by EU law. Over time, as the popularity of UCITS funds has increased, the framework has been developed – for example, to extend the range of investments in which a fund can invest while still qualifying as a UCITS.

The term 'transferable securities' in the UCITS acronym is defined as:

1. shares in companies or other securities that are treated equivalently to shares in companies
2. bonds and/or other forms of securitised debt securities, or
3. any other negotiable securities carrying the right to acquire such securities by subscription or through an exchange.

A UCITS fund that is established and authorised in one EU member state can be sold across the border into any of the other EU member states, without a requirement for any further authorisation, known as 'passporting'. When the UK's transition period with the EU came to an end, so too did the UK's passporting rights. EU-based firms must apply for and obtain the necessary approvals from the UK regulator to continue operating within the UK.

UCITS also introduced the concept of a group. This meant that a UCITS had not only to comply with the various restrictions set out, but it also had to ensure that the aggregate of its exposures to transferable securities, deposits and money market instruments, issued by members of any one corporate grouping, and of OTC derivatives if a member of that corporate grouping was a counterparty, did not exceed 20% of the fund's NAV.

The UCITS regime also introduced the key investor information document (KIID) – which is a generic document to be issued to investors pre-sale – as a replacement for a fund's simplified prospectus in order to increase transparency and aid the investor.

2.6.2 PRIIPs

Packaged retail and insurance-based investment products (PRIIPs) were introduced in 2014 in response to surveys and consultations conducted by the European Commission. These surveys found that retail investors across the EU often did not understand the associated risks and costs in their investment decisions, resulting in them suffering unforeseen losses. By creating a new standard common disclosure document for retail investors, PRIIPs aims to support the European single market, enhance comparability with UCITS funds, and improve the overall comprehensibility of financial products for retail investors.

PRIIPs covers all packaged financial products that are publicly marketed in the EU and includes insurance policies. PRIIPs, therefore, applies to asset managers and banks, as well as insurance companies. Additionally, it covers products with exposure to underlying assets that provide a return over time and that have an element of risk.

Under PRIIPs, funds are required to produce key information documents (KIDs). These documents are very similar to KIIDs, except that the framework for KIIDs applies specifically to UCITS funds, whereas KIDs are broader and apply to a wider range of packaged retail and insurance-based products.

In 2020, PRIIPs was transposed into UK law (called UK PRIIPs). UCITS firms do not have to comply with PRIIPs requirements until 31 December 2026. However, since 2022, PRIIPs firms must comply with UCITS requirements – this means that they have to produce a UCITS KIID for UK investors and a PRIIPs KID for EU investors for any cross-border funds.

Note that PRIIPs is due to be replaced with a new Consumer Composite Investments (CCI) regime. The FCA is currently consulting on consultation paper CP24/30, and they plan to issue a policy statement with final rules in 2025.

2.7 Unregulated Collective Investment Schemes (UCISs)

Collective investment schemes (CISs) can be authorised, unauthorised or unregulated. Funds that have not been authorised or regulated by the FCA cannot be marketed to the general public.

UCISs are not subject to the rules that they would have to follow if they were classed as FCA regulated. These rules govern the scheme's investment and borrowing powers, disclosure of fees and charges, management of conflicts of interest and investor safeguards.

Not being subject to FCA requirements gives UCIS operators the freedom to pursue unorthodox investment strategies, and also means that UCIS investors generally place their capital at greater risk than would be the case for more mainstream investments. Examples of investments that can be held in a UCIS include unlisted shares, traded life policy investments, fine wines and crops.

Some of the specific risks include the following:

- a potential lack of liquidity
- redemption can be at the discretion of the fund manager
- charges may be high or unclear
- the fund may be geared, leading to risk of increased loss
- there may be a lack of information on the fund and its past performance, and
- no ombudsman protection (eg, in the UK, under the **Financial Ombudsman Service (FOS)**) and not covered by compensation schemes (eg, the UK's Financial Services Compensation Scheme (FSCS)).

3. Closed-Ended Funds

Learning Objective

5.3.1 Understand the main types, purposes, common investment characteristics and behaviours of: onshore closed-ended funds and investment companies; investment trusts; real estate investment trusts; offshore closed-ended funds and investment companies

5.3.2 Understand when and why borrowing/gearing is used by closed-ended funds, and the benefits and risks associated with it

5.3.3 Analyse the relative merits and limitations of investing in closed-ended funds and investment companies compared with other forms of direct and indirect investment, in terms of: risk; return; tax treatment; premiums and discounts; turnover, liquidity and access; expenses – transaction and administration; management and administration

3.1 Investment Trusts

Investment trusts are mostly found in the UK and Japan. The name 'investment trust' is misleading as it is a public company, not a trust. Consequently, they are run by a board of directors who may undertake the investment management of the investment trust themselves (in which case it is called a self-managed investment trust). In practice, however, the board will commonly employ a third-party fund manager to manage the investments and to provide other services, such as administration, registration and accountancy.

An investment trust has a capital structure like a company; this means that it has a fixed number of shares in issue at any one time. Like unit trusts and OEICs, their principal activity is to invest the funds they control according to their stated investment objectives. Also, like unit trusts and OEICs, investment trusts can be a suitable investment for small investors.

Investment trusts are also subject to some rules on the type of investments they can hold, and the concentration in the securities of any one issuer. However, these rules are more relaxed than those for open-ended schemes (unit trusts and OEICs). Thus, investment trusts have wider investment freedom. For example, investment trusts can:

- invest in unquoted private companies as well as quoted companies
- provide venture capital to new companies or companies requiring new funds for expansion
- invest in property via REITs, and
- gear up (ie, borrow money on a long-term basis by taking out bank loans and/or issuing bonds) – this can enable them to invest the borrowed money in more securities. See section 3.1.2 of this chapter.

3.1.1 Premiums and Discounts

Investment trusts are listed and traded on the stock exchange, such as the London Stock Exchange (LSE) in the UK (although many offshore investment trusts are listed and traded on other exchanges, such as the Channel Islands Stock Exchange or in Dublin). Shares are generally bought and sold through a broker (not from the fund's manager) or a platform. As with unit trusts and OEICs, the NAV is calculated for investment trusts, although this is not used for the share price; rather, the price of the investment trust's shares fluctuate according to supply and demand as opposed to the valuation of the component assets.

As a result, the share price of an investment trust may trade at a premium or discount to the NAV of the underlying portfolio, in accordance with shareholder demand:

- When the share price is above the NAV, it is said to be trading at a premium.
- When the share price is below the NAV, it is said to be trading at a discount.

While the investment trust's prevailing premium/discount is useful, it must be contextualised relative to its history. For example, an investment trust whose shares are trading at a 10% discount today may look attractive in isolation, but if it has historically traded at a 20% discount, then this may not represent a buying opportunity. Similarly, an investment trust that is trading on a large premium may not necessarily be a 'sell' if its shares naturally trade at that level. It is important to consider the drivers for any widening or narrowing in the premium/discount over the long and short term (eg, a change in manager).

Many investment trusts have programmes in place to try and manage the extent of any discount by buying shares and holding them in treasury in an effort to support the price, called a discount control mechanism (DCM). The shares may then be sold again at a later date in order to reduce any premium, called a premium control mechanism (PCM).

3.1.2 Gearing

One important distinction between open-ended and closed-ended funds is that the latter has the power to borrow against the fund's assets. Authorised open-ended funds can generally only borrow in certain limited circumstances, whereas closed-ended funds have much wider borrowing powers.

Investment trusts often place strict limits on how much gearing the manager can use; the level of gearing is decided by the board of directors and the manager, and is typically determined based on the investment trust's specific goals, risk tolerance and market conditions. Once agreed, the limits are then disclosed in the investment trust's prospectus or offering documents. A common maximum is 25–30% of the investment trust's total assets, although variations exist from one investment trust to another.

Gearing has its benefits and risks. For example, consider a closed-ended fund that borrows 50% of the value of its portfolio and invests this additional borrowed capital in the market:

- If it invests well and the new investments gain in value, it stands to make greater gains than a fund which did not borrow; it has geared up its performance. The additional gains made on the extra investment will boost performance, even after it has repaid the capital of the loan and paid the interest due on it.
- On the other hand, if the portfolio falls in value, the fund must be able to repay the loan when it falls due, as well as the interest on an ongoing basis. Thus, as well as falling due to the poorly performing investments, the portfolio is suffering from outflows to service the borrowings. The fund will do worse than a similar fund without gearing.

This ability to gear means that closed-ended funds have both the potential for greater gains than their open-ended peers (particularly in rising markets/favourable conditions), and the potential for greater losses (particularly in falling markets/downturns). For this reason, closed-ended funds with borrowing powers are potentially more volatile – and therefore, should be seen as potentially higher risk (but also potentially higher reward) – than their open-ended peers.

3.1.3 Charges

Charges incurred on investment trust holdings can be compared with the alternatives. Today, most unit trust and OEICs waive initial charges (except for the bid/offer spread), although some still apply them at around 5%. Initial charges may be much lower than this (at around 0.25%) for some investment trust savings schemes, which are dealing services dedicated to the securities of one or more investment trusts. However, there may be charges for selling investment trust holdings.

There are internal charges applied within investment trusts. These include annual management charges plus certain other costs, such as auditors' fees, custody fees, directors' remuneration, secretarial costs and marketing costs.

There are also charges that are external to the investment trust that the investor may incur, such as dealing charges, including commission and 0.5% stamp duty/SDRT (on the purchase only).

3.1.4 Share Classes

Investors in investment trusts will most likely be holding ordinary shares. With this basic structure, shareholders are entitled to receive all the income and capital of the investment trust (after any borrowings have been repaid).

However, some investment trusts can offer different classes of shares, each offering different rights and benefits, although these are far less common. These investment trusts are known as split capital investment trusts, or splits.

Split capital investment trusts usually have a limited lifespan, and their various share classes are intended to appeal to different types of investors. They have become significantly more sophisticated and today offer a wide range of different types of shares, as discussed below.

On an agreed date, split investment trusts may be wound up and the assets divided according to a set formula. With some split investment trusts, there is a provision for shareholders to vote on whether or not to wind up the investment trust. A typical example is a split investment trust set up for an initial life of ten years, but with the provision to extend it by three years at a time.

Income Shares

Income shares pay out broadly all the income received by the investment trust. They are normally purchased by investors who find income convenient and tax efficient.

There are several different types of income shares with significant differences in capital entitlement. It is important to distinguish between these, because certain shares can give rise to substantial capital losses at redemption, so investors considering buying them should ensure that they understand the terms of investment or take advice before investing:

- Traditional income shares give a right to the income earned by the investment trust (paid out in the form of regular dividends). They have a fixed redemption price, subject to there being sufficient assets left in the investment trust at the date of its winding-up, after repayment of any debts and other preferred classes of shares.
- Some income shares are rather closer to an annuity (a product which pays a set, or contractually agreed, regular level of income). Such shares may pay a high level of income, but only a nominal redemption amount (eg, 1p for every 100p share).

Some income share issues sit halfway between the above two examples, combining an element of fixed redemption price with a certain share of any remaining capital at redemption.

Capital Shares

Capital shares are the counterpart of the income shares and they act as a kind of mirror image. In most cases, they pay no income whatsoever. Shareholders benefit from the bulk of the assets when the investment trust is finally wound up, after prior-ranking shares have been paid. These shares are highly geared and tend to be very volatile (ie, their price can go up and down dramatically). They are normally bought by investors who find capital gains more tax efficient and who do not require a regular income stream to live on.

Other Types of Shares

Some less common share types which may be encountered include (among others):

- **'A' shares** are ordinary shares, but they carry no voting rights; they will often have dividend rights over and above those of ordinary shares.
- **'C' shares** are a temporary class of share. Money received from a new issue is initially allocated to C shares which are converted, in due course, into the existing class of shares, at a price determined by their NAV, once the new capital has been invested. This approach avoids flooding the existing portfolio with cash which could unfairly dilute the short-term performance of the existing shares to the disadvantage of the existing shareholders.
- **'S' shares** are a means of launching a new investment trust with a strategy which is close to, but not quite the same as, that of an investment trust already in existence. The shares form a distinct and different portfolio which remains separate throughout the life of the investment trust, with separate price quotes and NAVs.
- **Zero dividend preference shares (zeros or ZDPs)** pay no income but offer a predetermined rate of return when the investment trust is finally wound up (after any bank loans are repaid). Returns are not guaranteed as there may be insufficient assets at wind-up, but there is a very strong likelihood that the return will be paid because of their prior claim on the assets. Returns are taxed as capital growth (not income).

3.1.5 Performance Characteristics (Risk versus Reward)

Investment trusts can provide very rewarding opportunities for investors. This is because of the following:

- They have wider investment freedoms relative to open-ended funds. Thus, the managers are able to access a broader range of opportunities.
- They do not have the same kind of liquidity problems as open-ended funds. As investment trust managers are not under pressure to sell holdings to meet investor redemptions (as open-ended fund managers are), they are able to hold on to these opportunities for some years. In turn, this means that investment trust managers are typically very long-term in their approach, avoiding unnecessary portfolio turnover.
- They are able to gear up. This can help active managers to enhance returns and outperform their benchmarks, in the right market conditions.

However, because of their nature, they also involve a higher level of risk relative to open-ended funds.

For example:

- Investment trusts can hold more illiquid shares, which can be difficult for the investment trust to sell in order to take advantage of better opportunities (ie, liquidity risk).
- The existence of premiums and discounts makes investment trusts more volatile and more complex, since there is movement in the premium/discount as well as variation in the price of the underlying assets. There is always the risk of a widening discount of the share price in relation to the NAV.
- While gearing amplifies returns in bull markets, it exacerbates losses in downturns.

In some (but not all) cases, they may have relatively young and inexperienced management teams, and their lack of track record may mean that the best decisions are not always taken.

3.2 Real Estate Investment Trusts (REITs)

As we saw in section 4.8.5 of chapter 1, REITs are tax-transparent property investment vehicles.

From an investor's point of view there are some factors that need to be considered when investing in REITs. Shares in listed property companies are significantly more volatile than direct property investments or unit trusts, and perform more like equities than property. However, in the long term, their performance is more closely correlated with property than equities.

From a tax perspective, the tax issues include the fact that dividends from REITs are treated as income to the investor, and are taxed accordingly. Purchasing a REIT investment has lower transaction costs where the investor only has to pay a 0.5% stamp duty on shares instead of up to 12% stamp duty land tax (SDLT) on the direct purchase of a property investment.

REITs may pay dividends as PIDs or non-PIDs, the taxation of which is discussed in chapter 4, section 3.2.3. REITs can also be held in ISAs, JISAs and child trust funds (CTFs), and the managers of these receive gross distributions, making them highly tax efficient.

4. Common Investment Characteristics of a Fund

Learning Objective

5.1.6 Analyse the relative merits and limitations of investing in a collective investment fund compared with other forms of direct and indirect investment, in terms of: risk; return; tax treatment; turnover, liquidity and access; expenses – transaction and ongoing; management and administration

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CISs can provide a useful alternative to direct investment for those investors without:

- the time to manage their own investments
- the large sums of money required to get adequate diversification
- the expertise to assess investments, or
- sufficient money that would enable a fund manager to offer a segregated portfolio.

The advantages and disadvantages of investing via a fund, compared with other forms of investment, include:

Advantages	Disadvantages
Diversification – funds pool money from multiple investors to invest in a diversified portfolio of securities. This diversification helps to spread investment risk, and reduce the impact of any single investment's performance on the overall fund. **Professional management** – funds are managed by investment professionals, who conduct research, monitor market conditions, and make informed investment decisions on behalf of investors. This expertise can be particularly valuable to investors who lack the time, knowledge or desire to actively manage their investments; or who may not have the resources or expertise to build their own diversified portfolio. **Tax** – offshore funds can act as a tax shelter, since the investor does not pay CGT on gains made on the underlying investments as they arise. Instead, CGT will be paid on the sale of the holding which may be at a time when the investor falls into a lower tax bracket. **Eliminates administrative burdens** – by investing in a fund that is professionally managed, the individual investor is relieved of the time-consuming administrative burden of researching and managing the investments themselves. **Accessibility and affordability** – funds provide access to various financial markets and investment opportunities globally, that may others be challenging for individual investors to access. Individuals can invest relatively small amounts of capital in exchange for a diversified portfolio of securities, that would otherwise require significant amounts of capital to replicate individually.	**Fees and expenses** – funds charge various fees and expenses including annual management fees, administrative costs, and sales loads. These fees can eat into the returns generated by the fund and reduce the overall profitability for investors. **Portfolio turnover** – a high portfolio turnover can be detrimental to returns, as it can lead to a significant increase in transaction costs. **Lack of control** – when investing in a fund, investors relinquish control over the investment decisions to the fund manager. While this can be advantageous for those who prefer to have their investments handled by professionals, it may not be suitable for those who want more control over their investment choices. **Performance** – specialist investment expertise does not guarantee satisfactory performance. **Overdiversification** – while diversification is a key advantage, excessive diversification can make it challenging for a fund to outperform the market or generate substantial returns, as gains from well-performing assets can be diluted by underperforming ones. **Tax inefficiency** – some offshore funds are not ideal for investors from a tax perspective, because of their unfavourable treatment by the tax authorities. Also, some funds may be liable to withholding taxes on underlying investments which cannot be reclaimed. Investment managers should seek to minimise the impact of such taxes.

Advantages	Disadvantages
Liquidity – most funds offer high liquidity, allowing investors to buy and sell their units/ shares on any business day. This makes it easy for investors to enter or exit their positions. **Tax** – offshore funds can act as a tax shelter, since the investor does not pay CGT on gains made on the underlying investments as they arise. Instead, CGT will be paid on the sale of the holding which may be at a time when the investor falls into a lower tax bracket.	

4.1 Offshore Funds

Learning Objective

5.1.3 Understand the main types, purposes, common investment characteristics and behaviours of: onshore collective investment funds; offshore collective investment funds

5.1.4 Understand the tax treatment of UK investors investing in offshore funds, including: differences between reporting funds and non-reporting funds; taxation of offshore funds

An offshore fund is an investment that is based in a foreign country, usually a country that has favourable taxation regulations. These funds are usually established and run in low-tax jurisdictions such as the Channel Islands, the Isle of Man, the Cayman Islands, Hong Kong and Bermuda. Luxembourg and Dublin are also important tax havens within the EU. Many offshore funds are run by companies associated with large unit trust groups, and most of the countries involved have their own regulatory frameworks.

In the UK, HMRC defines an offshore fund as a mutual fund, as per the definition provided by section 40B of the Finance Act (FA) 2008 or section 356 of the Taxation (International and Other Provisions) Act (TIOPA) 2010. An offshore fund is one that is resident or based in a territory outside the UK and which takes one of the following three forms:

- A mutual fund constituted by a body corporate resident outside the UK.
- A mutual fund under which property is held on trust for the participants by trustees resident outside the UK.
- A mutual fund constituted by other arrangements that create rights in the nature of co-ownership where the arrangements take effect by virtue of the law of a territory outside the UK.

Certain types of foreign partnerships that do not meet the requirements are specifically excluded from the meaning of an offshore fund given by section 40A(3) FA 2008.

There may be income and CGT advantages for UK expatriates who are non-UK resident. In general terms, there will be no tax paid by an offshore fund; however, there may be withholding tax, which may not be reclaimable by the fund. In addition, a fund may be subject to a small amount of local tax. Jersey funds are subject to a flat yearly corporation tax and Luxembourg funds to a tax on the asset value each year. The expenses of an offshore fund cannot be offset against its income.

However, investment in offshore funds may not be as advantageous for UK residents as they may think, particularly from a tax point of view. In most cases, the tax benefit is limited to a possible deferral of tax payments resulting from income being paid gross. There can even be tax disadvantages, particularly if the offshore fund invests in UK shares.

To be promoted to retail investors in the UK, offshore funds must be recognised under Section 272 of the Financial Services and Markets Act (FSMA) 2000. FCA recognition of offshore pooled investments can be applied to either individual funds or to the umbrella structure (in which case, all funds listed within that structure have FCA recognised status). In contrast, unregulated and non-recognised funds are subject to severe marketing restrictions in the UK; prospectuses and details can only be forwarded to investment professionals, such as stockbrokers and independent financial advisers (IFAs).

There are two categories of offshore funds: reporting funds and non-reporting funds.

4.1.1 Reporting Funds

Funds that meet certain HMRC conditions can apply to be a reporting fund. The relevance of reporting fund status for UK investors is that gains realised on disposal will, in most circumstances, be subject to capital gains tax (CGT); this is not the case for non-reporting funds.

Reporting funds must prepare accounts in accordance with an acceptable accounting policy and provide reports of their 'reportable income', which is the accounts figure for the total return of the fund adjusted in accordance with certain rules set out in the Offshore Funds (Tax) Regulations 2009. They must provide reports both to HMRC (to include a computation showing their reportable income) and to investors that show their proportionate share of that income. Further, reporting funds must make certain information available to HMRC when requested to do so.

Funds may apply for reporting fund status in advance or in arrears, subject to certain time limits. Once granted reporting fund status, a fund may rely on that status going forward subject to continued compliance with the reporting funds rules, which include making reports as described above for each period of account.

A fund may exit the reporting funds regime on giving notice. There are also rules that permit HMRC to exclude a fund from the regime for serious breaches or a number of minor breaches, subject to an appeals process.

A list of approved offshore reporting funds (updated monthly) is available on the GOV.UK website at https://www.gov.uk/government/publications/offshore-funds-list-of-reporting-funds.

4.1.2 Non-Reporting Funds

A non-reporting fund is any offshore entity that has not obtained reporting fund status, or has left or been excluded from the reporting fund regime. That is, it is an offshore fund to which Part 3 of the Offshore Fund (Tax) Regulations 2009, which deals with reporting funds, does not apply.

While investors in reporting funds are subject to capital gains tax (CGT) on realised gains, non-reporting funds are instead subject to income tax; hence, the rates are less favourable.

Non-reporting funds are under no obligation to provide information to HMRC, but it is likely that such a fund will be obliged by local law or by its constitution to provide information to investors in respect of income arising to the fund. Although it is expected that they would provide details of distributions as a matter of routine to UK investors, it is the responsibility of investors to otherwise obtain and record such information.

4.1.3 Taxation of Offshore Funds

The taxation of the individual investor who has an interest or stake in an offshore fund will depend on whether the fund is reporting or non-reporting.

Offshore Reporting Funds

Dividends and interest from reporting funds are treated as gross income. Any excess above the individual's dividend allowance (DA) or above the personal savings allowance (PSA) respectively is taxed at the standard rates, depending on the recipient's tax bracket. See chapter 4, section 1.2 for more information on these allowances.

Capital gains are subject to CGT with the calculation based on standard CGT principles and with the investor being able to use the CGT annual exemption as normal.

Reporting funds are generally preferable for most UK investors due to CGT rates being more favourable than income tax rates. Also, non-taxpayers benefit from receiving the income.

Offshore Non-Reporting Funds

Like reporting funds, dividends received from offshore non-reporting funds are taxed as income. However, investors cannot use the DA to offset against those dividends or the PSA against interest.

Any gains made on disposal are treated as income, meaning the CGT annual allowance cannot be applied to limit this income tax liability and is taxed as an offshore income gain (OIG). All income received from offshore funds are treated separately on the Self-Assessment form.

These rules do come with the following results:

- Investors in non-reporting funds may pay income tax on theoretical income which they have not yet received in practice. This is also known as a 'dry' or 'unfunded' tax charge.
- However, this income will grow in a low tax environment so the investment may grow faster.

The Uses and Tax Benefits of Offshore Funds

Offshore funds may be useful for those who require a wider choice of funds than is available onshore. They are particularly attractive to investors who wish to use currency funds or hedge funds.

A fixed-interest fund with reporting status may be useful for a non-taxpayer. Earnings will be invested in the fund, which is rolling up tax-free and the investor will receive a gross dividend. In the case of a non-reporting fund, the taxpayer will pay no tax while the income is rolling up. If a higher rate taxpayer can take encashment when their status will have fallen to basic rate status, the postponement of the encashment will provide a clear tax advantage.

A non-reporting fund may also be useful for a UK resident who is anticipating retiring abroad. The investor can 'roll up' the investment tax-free and then encash it when no longer a UK resident and subject to UK tax. The tax treatment of the encashment needs to be examined in relation to the tax code operating in the country in which residence is established.

5. Charges and Pricing of Collective Investment Schemes (CISs)

Learning Objective

5.1.5 Analyse the charges and pricing of collective investments: initial, annual, exit and performance fee charging structures; single pricing; bid/offer pricing; dilution levies; forward pricing/historic pricing

5.1 Fee Charging Structures of Open-Ended Funds

All of the parties involved in the operation of a fund will seek payment for their services. Payment may be on the basis of a percentage of the size of the fund, per transaction, a fixed fee per annum or on the basis of expenditure claimed for specific work undertaken.

Before moving on to how a fund is priced, we will briefly look at those fees charged by the unit trust manager (unit trust) or OEIC's authorised corporate director (ACD). Remember that other parties (custodians, advisers and the like) will also be levying fees.

Some investment funds (eg, OEICs and unit trusts) make charges for undertaking the management of the fund. The types of charges that can arise (but not necessarily always) include the following:

Loads

- **Initial charges** (also called preliminary charges) are a type of front-end load. They may be charged when an investor deposits money into a fund, expressed as a percentage of the amount invested. Charges vary widely between funds depending on whether the investor deals directly with a manager or uses a fund supermarket or platform. Because of investor dissatisfaction, a number of fund groups have dispensed with initial charges and, in some cases, charge exit fees.

- **Exit charges** (also called deferred sales charges or redemption fees) are a type of back-end load. They may be incurred when investors sell their units/shares. Generally levied instead of an initial charge, they incentivise investors to stay in the fund. Exit charges are usually staggered (ie, reduced for every year that the investor remains invested).

There are also no-load funds that do not charge any one-off entry or exit fees; however, the funds recoup these fees as expenses from another part of the investment, which will lead to a higher expense ratio.

Expense Ratios

The expense ratio is an annual operating expense that is levied on the fund's annual earnings or investment income. It is a crucial piece of information; as all funds must compute an expense ratio using the same methodology, it allows investors to compare costs across funds. The biggest part of this ratio is the management fee.

- **Annual management charges (AMC)** are deducted periodically from the fund value, usually expressed as a percentage of the funds under management. A typical figure is 0.5–1.5% a year, albeit typically lower for passively managed funds and higher for specialist funds. For example, if a fund is valued at £25 million, the quarterly management fee of 1% pa will be £62,500 (ie, 1% x £25 million / 4).

  The management fee is paid to the fund manager or sponsor who organises the fund, who provides the portfolio management or investment advisory services, and normally lends its brand name to the fund. The fund manager may also provide other administrative services. The management fee often has breakpoints, which means that it declines as assets (in either the specific fund or in the fund family as a whole) increase. The management fee is paid by the fund and is included in the expense ratio (see below).

  The fund's board of directors reviews the AMC annually. Unitholders or shareholders must vote on any proposed increase in the management fee. However, the fund manager or sponsor may agree to waive all, or a portion, of this fee to lower the fund's expense ratio.

  Note that both open- and closed-ended funds charge annual management fees.

- **Ongoing charges figure (OCF)**, also called the ongoing charges (OGC), covers costs and expenses for the running of the fund such as dealing commissions, audit fees and custody fees. It is usually expressed as a percentage of the funds under management.

  Another way that these costs may be disclosed to investors is through the **total expense ratio (TER)**. The only material difference between the OCF and the TER is that the OCF includes certain one-off charges (eg, loads; see above) and performance charges (see below), while the TER does not. Hence, the OCF gives a more accurate measure of what it actually costs to invest in a fund from one year to the next.

- **Performance charges** reward the manager with an additional percentage-based fee if they outperform a specified benchmark. Performance fee structures can be complicated and there are a variety of ways of calculating them.

  Usually, performance fees are stated to be payable only on net new highs (ie, the manager will not be rewarded if the fund falls in value and their 'outperformance' consists of simply regaining ground that was lost), often referred to as the 'high-water mark'.

  Any performance fees specified in a prospectus must be calculated on the basis of the fund's performance after the deduction of all other charges.

The manager/ACD is entitled to the initial charge, exit charge and AMC.

Other Expenses

Funds may also contain a number of charges and expenses not included in management fees, and which are not included in the marketing and distribution expenses. These may include custodial expenses, legal expenses, accounting expenses, transfer agent expenses, and any other administrative expenses. They may also include charges for trading costs, bid/offer spreads, slippage costs and research costs.

Overall, charges vary from fund to fund, but the charging structure must be detailed in the fund's prospectus. Institutional investment in funds is clearly going to be significantly larger than any retail investment, which can reduce overall charges in percentage terms.

5.1.1 Reduction in Yield (RIY)

Reduction in yield (RIY) is a way of expressing the impact of all charges on a fund (as well as other investments, savings and pension policies) over a period of time.

This can provide a useful way of judging whether a fund is good value. It defines the reduction in the yield or return that would otherwise have been provided if the fund was not subject to any charges or expenses. See chapter 6, section 3.1.1.

5.1.2 Regulatory Requirements

In accordance with the Markets in Financial Instrument Directive (MiFID) II and Packaged Retail Investment and Insurance Products (PRIIPs) regulations, investment firms are required to disclose all costs and charges involved in investing in products, including funds, to make the cost of investing in those products completely transparent and comparable. MiFID II emphasises unbundling practices, where firms disclose the costs paid to brokers separately. Additionally, MiFID II prohibits the passing on of broker commissions to clients.

While both MiFID and PRIIPs are pieces of EU legislation, they have been implemented into UK law, so they continue to apply in a UK context post-Brexit. MiFID II applies to MiFID firms (ie, financial services businesses undertaking MiFID business anywhere in the EEA), and PRIIPs apply to funds and products that are marketed to EEA-resident retail investors. Note that PRIIPs is due to be replaced with a new Consumer Composite Investments (CCI) regime.

5.2 Pricing of Open-Ended Funds

5.2.1 Single Pricing

Open-ended funds may be single-priced or dual-priced.

For single-priced funds, the manager/ACD will calculate a single price for the units/shares which will apply to all transactions in that dealing period. In the UK, the FCA lays down rules as to how this should be carried out, and the manager/ACD must abide by these rules and any additional rules that it sets out in the fund's offering documents.

OEICs are typically single-priced to align with SICAVs. Single pricing is straightforward, as it allows all buyers and sellers to use the same price. However, this structure could disadvantage long-term investors in the fund, particularly when there are more sellers than buyers (or vice versa).

Dilution Adjustment

One solution is a dilution adjustment (also called single swinging price) whereby the fund can artificially increase or reduce its NAV to account for the extra portfolio trading costs created by any significant trading activity.

Dilution Levy

The alternative is a dilution levy (also known as a dealing charge), which is paid by investors when they buy or sell units/shares in the fund, typically up to 5%. Dilution levies may be imposed by a fund manager to cover dealing costs, including market spread of the underlying investments.

The levy is designed to ensure that existing investors do not suffer costs associated with inflows/outflows resulting from other investors subscribing for, or redeeming, shares. Thus, the dilution levy might be better known as an anti-dilution levy. Dilution levies tend to be imposed on single-priced funds rather than dual-priced funds, as the latter have separate prices for buying and selling units, with the difference (the spread) covering the transaction costs.

The fund manager will assess the costs and will estimate what, if any, levy is applicable. They are not obliged to apply a dilution levy, but the policy must be stated in the fund documentation so that investors know what to expect.

Historically, dilution levies have proven to be very unpopular with investors, so fund managers often seek alternative ways to address dilution concerns.

5.2.2 Dual Pricing

As an alternative to single pricing, open-ended funds may be dual-priced; that is, the manager shows a bid price and an offer price for units/shares in the fund. Unit trusts are typically dual priced. Again, in the UK, the FCA lays down rules for authorised funds on how this must be done.

For dual-priced funds, the bid/offer spread includes the initial charge, the buying and selling prices of the underlying investments, and any other costs involved in those trades. The bid price is the price which investors will receive if they sell their units/shares back to the fund, while the offer price is the price investors will have to pay if they buy units/shares. Both the bid and offer prices are based on the NAV of the fund.

The difference between the bid and the offer price is known as the bid/offer spread.

5.2.3 Forward and Historic Pricing

Open-ended funds are dealt in at prices based on their NAV, but at what point exactly is the NAV calculated? This can matter a great deal, since the prices of the underlying investments of the fund may themselves be very volatile. This could mean that the price of units/shares in a fund is very different at the start of the day and at the close of business.

Consequently, fund managers may have a policy to value funds based on the following:

- **A forward pricing basis** – orders are taken from investors and the prices at which they deal are determined at the next valuation point. This may mean that the investor is dealing blind as they do not know the actual price at which they are dealing.
- **A historic pricing basis** – here the managers will deal at the last valuation price. The main benefit is that investors know the price they are dealing at.
- There may be circumstances in which a fund manager who normally deals on a historic basis may choose to deal on a forward basis. These are:
  - the fund manager believes that the fund value has moved by more than 2% in either direction
  - the investor requests a forward price, or
  - the manager may choose to deal on a forward basis on large deals.

In the UK, under the FCA's COLL 6.3.3 *'the authorised fund manager must carry out a fair and accurate valuation of all the scheme property in accordance with the instrument constituting the fund and the prospectus'*.

Fund managers are therefore required to document the methodology they use to determine the value of the underlying assets, including their 'fair value' when no market valuation is available.

5.3 Pricing and Charges of Closed-Ended Funds

As we saw in section 3.1.1 of this chapter, the price of an investment trust is subject to investor supply and demand, as opposed to the valuation of the component assets.

Investors in investment trusts normally have to pay dealing fees plus SDRT of 0.5%. Dealing fees may be waived in some circumstances if the investor buys direct through the investment trust's management company; otherwise, the fee will depend on which stockbroker or platform they use.

Similar to dual-priced open-ended funds (as covered in section 5.2.2), one feature of investment trusts is that they are subject to bid/offer spreads.

As many investment trusts are actively managed, an annual management charge (AMC) is deducted periodically from the fund, and is usually a fixed percent of its NAV, to cover the manager's costs. The AMC can vary widely, depending on the investment trust – larger trusts (which benefit from economies of scale) tend to apply lower charges, while smaller and more specialist investment trusts tend to apply higher charges.

Performance fees are more common in investment trusts than in open-ended funds, although some investment trusts have scrapped performance fees in recent years to make their charges more transparent. Recall that the OCF provides a clear picture of the total annual costs.

6. Tax-Efficient Savings

Learning Objective

5.4.1 Analyse the key features, restrictions and tax treatment of ISAs and child trust funds (CTFs): eligibility; eligible investments; subscriptions and additional subscriptions; transfers; withdrawals; use in investment and tax planning

6.1 Individual Savings Accounts (ISAs)

Individual Savings Accounts (ISAs) are not products themselves, but a wrapper that makes existing investments more tax efficient. The extent of this tax efficiency depends largely on the tax status of the individual investor, which can make ISAs an important method of saving for the future.

Due to the tax benefits they offer, the amount that investors can save into an ISA each year is limited. Overall, the contributions to ISAs are limited to £20,000 in total for the tax year 2025–26, although there are some exceptions depending on the type of ISA. The ISA allowance can be invested in any type or combination of ISAs, as long as the total subscribed across all of them does not exceed the allowance.

ISAs are only available to people who are:

- below 18 (junior ISA)
- 18 years or over (cash, stocks and shares, flexible or innovative finance ISA), or
- 18 or over, but under 40 (lifetime ISA).

Additionally, they must also be a UK resident or a Crown servant or member of the armed forces (or their spouse or civil partner) working abroad. An individual who has opened an ISA in the UK before moving abroad can retain their ISA, but will not be allowed to put any more into it after the tax year that they move, unless they are a Crown employee or a spouse/civil partner of one.

Transfers Between ISA Managers

It is possible for investors to transfer their ISA investments. The regulations stipulate that ISA managers have to allow transfers (but receiving managers do not have to accept transfers).

If an investor wants to transfer the current tax year's ISA subscription, the current tax year's subscription must be transferred in its entirety. If an investor has made subscriptions in previous years, all or part of the previous tax year's subscription can be transferred to another ISA manager at any time. The transfer does not impact on the current tax year's subscription.

Additionally, investors are allowed to transfer from a cash ISA to a stocks and shares ISA, and from a stocks and shares ISA to a cash ISA.

If investors transfer savings from a cash ISA to another cash ISA, the transfer must usually be completed within 15 business days of it being requested. Any other type of account transfer must usually be completed within 30 business days of the request. When making a transfer, it is important that the cash or investments do not pass directly to the investor, because the subscription rules would prevent them being reinvested in an ISA.

Additional Permitted Subscriptions

Additional permitted subscriptions (APS) can be made to a surviving spouse or civil partner of a deceased ISA holder provided the deceased and the survivor were living together at the date of death. Since 2018, the APS is the higher of cash and/or investments passed on, or the value of the ISA on the date of death.

The additional subscription can be used by the survivor to subscribe to a cash, stocks and shares, flexible or innovative finance ISA; and may be transferred to another ISA manager, other than the one who held the deceased's ISA. It can be made whether or not the survivor inherited the deceased's ISA assets. A non-resident can make an APS.

The opening of a new ISA solely to receive the additional permitted subscription will not breach the 'one ISA of each type per tax year' rule. Once the additional subscription has been made, they are treated as an ISA subscription in the previous year and come under normal ISA rules.

6.1.1 Cash ISAs

Eligible investments include:

- cash deposits or share accounts with a building society
- a deposit account with a UK authorised bank
- some NS&I products, and
- stakeholder cash deposit products.

6.1.2 Stocks and Shares ISAs

Eligible investments include:

- investments that are eligible for inclusion in a cash ISA (see section 6.1.1)
- shares that are officially listed on a recognised stock exchange anywhere in the world (this means that unquoted or unlisted shares do not qualify although AIM shares are eligible)
- officially listed corporate bonds
- government securities (eg, UK gilts, US Treasury bonds)
- units/shares in authorised unit trusts (AUTs) and UCITS, recognised UCITS and qualifying non-UCITS retail scheme
- shares and securities in qualifying investment trusts, including REITs
- shares acquired within the previous 90 days from an all-employee save as you earn (SAYE) scheme or share incentive plan. These qualify, even if the shares would not normally, for example they are not listed on a recognised stock exchange
- life assurance policies, as long as they are single life, and
- stakeholder medium-term investment products.

Nil paid rights, warrants to subscribe for shares, futures and share options are not qualifying investments, and may not be held in a stocks and shares ISA.

6.1.3 Flexible ISAs

As their name suggests, flexible ISAs are a more flexible type of ISA, in that-the-money withdrawn from it can be replaced in the same tax year; whereas in a standard ISA, it cannot.

Example

An account holder subscribes £15,000 into a flexible ISA, before withdrawing £10,000 later that tax year. They may subscribe a further £15,000 in that tax year to bring the total subscriptions to the annual limit (ie, £15,000 – £10,000 + £15,000 = £20,000).

For a standard ISA, the remaining subscription would be £5,000 (ie, £15,000 + £5,000 = £20,000).

Stocks and shares ISAs and cash ISAs can be flexible, but some other types cannot. Therefore, the eligibility of investments within a flexible ISA depend on the underlying account type.

6.1.4 Lifetime ISAs (LISAs)

Adults between the ages of 18 and 40 are eligible to open a LISA. The annual subscription limit for a LISA in 2025–26 is £4,000, which counts as part of the ISA allowance; thus, if someone contributes the maximum of £4,000 into a LISA, they can contribute up to £16,000 into other ISAs.

Up to the age of 50, LISA holders receive an annual government bonus of 25%, which is paid monthly. Savings invested in a LISA can be withdrawn at any time, but will be subject to a 25% charge unless:

- the withdrawals are going towards the purchase price of their first residential property in the UK, worth up to £450,000 with a mortgage
- the withdrawals are made when the investor is aged 60 or over, or
- the investor becomes terminally ill.

If the house is a joint purchase, then both individuals can use their lifetime ISAs and government bonus towards the purchase, but the maximum value of £450,000 still applies.

Further, an individual can save into both a LISA and a help to buy ISA (subject to the overall maximum; see section 6.1.5 below) if they meet the eligibility criteria. However, they will only be able to use the bonus from one to buy a house.

6.1.5 Help to Buy (H2B) ISAs

Help to buy ISAs are designed to help first-time buyers, boosting savings by 25% towards the cost of their first home. The maximum amount allowed to be invested is £12,000 and therefore the maximum bonus is £3,000 per person and for every £200 saved they will receive the bonus of £50. Account holders may invest up to £200 per month, plus an initial deposit of £1,200 (which is inclusive of the first monthly payment). The minimum saving to qualify for the bonus is £1,600.

Note that this type of ISA closed to new savers in 2019, but investors who opened a help to buy ISA before this date can continue to make contributions until 2029.

6.1.6 Innovative Finance ISAs (IFISAs)

Innovative finance ISAs cover peer-to-peer (P2P) lending, where lenders are matched with borrowers so each enjoys better rates and will mean those lending through P2P platforms will be able to get their interest tax-free. Qualifying investments are peer-to-peer loans and cash.

For a peer-to-peer loan to be eligible, it must be facilitated by an operator authorised under FSMA 2000. All loans must be made using cash held by the ISA manager and must be on genuine commercial terms.

Although investors can invest more than £20,000 into the P2P lending sector, only the first £20,000 per year will be eligible to be in an innovative finance ISA.

6.2 Junior ISAs and Child Trust Funds (CTFs)

JISAs and CTFs are both individual savings accounts for children. The accounts offer parents a tax-free way of saving for children.

CTFs were originally created to encourage parents to save for their child's future. The government's intention was that when the child reached 18, they would have some money to give them a start to life as an adult. At 18, they could carry on saving or use the money for other things, such as driving lessons or training courses.

Government contributions to CTFs were stopped in 2011 and the accounts themselves were discontinued. Children born after this date were ineligible to open CTF accounts and their savings were directed into JISA investments. Although no new accounts could be opened after that date, existing accounts are allowed to continue until the beneficiaries reach their 18th birthday. This meant that further contributions would continue to be allowed by parents, family and friends into the account subject to a maximum annual limit of £9,000 per account (2025–26).

The first CTF account matured in 2020, and the last will mature in 2029. If the child does not take the money out, the CTF will automatically roll over into a conventional adult ISA on maturity. The aim is to encourage young people to maintain a savings habit into adulthood.

JISAs were launched in 2011 and, since 2015, it has been possible to transfer CTFs to JISAs. Children can have a JISA if they are under 18 years of age, live in the UK and do not already have a CTF. Each child can have one cash ISA and one stocks and shares JISA at any one time. Children living outside the UK may have a JISA if their parent is a Crown servant (in the UK's armed forces, diplomatic service or overseas civil service, for example) and the child depends on that parent for care.

Anyone can put money into a JISA. Like CTFs, the JISA limit is £9,000 per account (2025–26). There is no tax to pay on interest or gains and the money belongs to the child, who cannot take this out until they are 18 years of age. If investment in the JISA is continued beyond the age of 18, it will automatically be converted to a conventional adult ISA.

6.3 Investment Bonds

The range of investment options to which investment bonds can be linked is as broad as what the insurance company is willing to offer. Investment bonds are not a type of tax wrapper in the way that ISAs are. Rather, they are a product in their own right, being an insurance product with investment benefits, which happens to have tax benefits owing to the way insurance policies are treated.

For the types of investment bonds available, among other information, see section 7 of this chapter.

6.4 National Savings & Investments

Learning Objective

5.5.1 Analyse the key features, restrictions and tax treatment of National Savings & Investments (NS&I), premium bonds and investments: use in investment and tax planning

National Savings & Investments (NS&I) products are offered by the UK government so, in essence, an investor holding an NS&I product is lending to the UK government. As such, they are regarded as risk-free investments; there is no overall limit on how much is guaranteed.

NS&I is an executive agency of the Chancellor of the Exchequer, and is accountable to the Treasury. It provides deposit and savings products to the investing public, and in doing so raises funds on behalf of the UK government.

NS&I offers a wide range of products, from easy-access savings accounts to longer-term investments, and premium bonds. Some of these products are available through post offices.

Please refer to chapter 1, section 1.9.1 for coverage of NS&I's key products, including their tax implications and associated considerations. As can be seen from this information, certain NS&I products come with favourable tax treatment – for example, some savings bonds may be exempt from income tax, providing a tax-efficient way for investors to grow their savings. Understanding the tax implications of each NS&I product can help in optimising an investor's overall tax position.

In terms of investment planning, NS&I offers a range of products with stable, predictable and safe returns (since they are backed by the UK government). Further, including NS&I products in an investment portfolio can contribute to diversification: diversifying across different asset classes, including government-backed savings, can help spread risk and mitigate the impact of market fluctuations. In addition to this, some NS&I products offer flexibility in terms of liquidity; while some products may have restrictions on withdrawals, others allow investors to access their money relatively easily, which can be advantageous in adapting to changing financial needs.

7. UK Onshore and Offshore Life Assurance Company Products

Learning Objective

5.6.1 Analyse the key features, relative merits and limitations of investing in onshore and offshore life assurance-based investments compared with other forms of direct and indirect investment: risk; return; tax treatment; turnover, liquidity and access; expenses – transaction and ongoing; management and administration

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It might seem odd to include financial products such as insurance policies and pensions in a chapter addressing investments. A professional portfolio manager would not generally use insurance and pensions products in a client's portfolio; however, certain insurance and pensions products are regarded as investments, for technical and regulatory purposes. Further, if we are to consider investment planning for the private individual, we should certainly take account of the different investment risks of such products.

We will consider those insurance policies and pensions which fall into the domain of investments. In this section, you will see the word 'bond' used – it does not have the same meaning as debt securities, although it is a promise to pay on the part of the life company.

7.1 The Main Types of Onshore Investment Bonds

7.1.1 Single Premium/Regular Premium Bonds

Life companies offer a wide range of products which can be used to provide protection benefits (ie, a pay-out if one or more particular individuals, called 'the life assured', die). These are life assurance products, or life policies. Many products offered by life companies also fulfil other financial needs – for example, providing a pay-out on the death of a policyholder. They may provide this return:

- at a set date (or earlier, if the life assured dies before this date), or
- they may simply run until either the individual dies or the policyholder redeems their policy.

Such policies may be single premium, or regular premium:

- With a single premium policy, the policyholder pays a one-off premium to the life company; top-ups may be allowed depending on the terms of the policy. These policies are called single premium life assurance bonds (SPLABs).
- Regular premium policies are paid for with a series of periodic premiums (monthly, quarterly or annual). They may be the same sum or revised from time to time, again depending on the terms of the policy.

When applying for the policy, the policyholder – if they are also the life assured – have to provide the life company with information about themselves, their lifestyle and health. (If someone else is to be the life assured, then their details will also be required.) This enables the life company to assess the risk of the life assured, from which it can then decide on what terms to issue the policy, what premium to ask for and indeed whether to proceed at all. This process of assessing the risk is called underwriting.

The benefits paid out on the death of the life assured, maturity of the bond, or on encashment at the policyholder's request, will depend on the value of the policy at that time. Some policies pay out a guaranteed death benefit, but the maturity proceeds or early encashment value will depend on the value of the investments within the policy. It is therefore very important that the policyholder understands what sort of policy they have purchased.

7.1.2 Unit-Linked Bonds

With unit-linked bonds, the premiums paid by the policyholder buy units in a fund run by the life company, or by an external institution with whom the life company has an arrangement (eg, a unit trust or OEIC). The value of the policy is measured in terms of the total number of units allocated to it, and the value of these units depends on the performance of the underlying investments.

The value of the bond generally fluctuates in line with the underlying investments. Generally, life companies offer a range of unit-linked options, with different risk profiles. These may include government or corporate bond funds, domestic or international equity funds and other variants. In many cases, the policy has no minimum maturity value, rather, its value is linked directly to the underlying funds.

Unit-linked bonds generally do not treat income and capital separately; rather, returns from invested income are added to the price of units. If income is required, this can be provided by the regular encashment of units.

In some cases, the policyholder will need a minimum sum assured. For example, if the policy is being used as the repayment vehicle for an interest-only mortgage, a lender will require that the policyholder covers the principal of the loan. This can be arranged through the purchase of appropriate life cover as a part of the policy. Unit-linked policies thus have no inherent basic sum assured; life cover is generally a built-in add-on to the policy.

In practice, how this works is that the policyholder pays a monthly premium to the life company. The life company then uses this to purchase units in the relevant underlying fund(s), and will also, on a monthly basis, cancel sufficient units to pay for any life cover needed. Life companies do not pay bonuses on unit-linked policies (as they do on with-profits policies); and the maturity value is linked solely to the value of units, which may fall as well as rise in value. Thus, there can be the risk that the policy does not pay out as much as was hoped, (eg, it may not repay any associated mortgage loan at the end of its term). If this looks likely, the policyholder can increase their monthly premiums, or perhaps switch to a more appropriate linked fund.

7.1.3 With-Profits Bonds

These products offer a benefit payable at some future maturity date, or on the earlier death of the policyholder, or on encashment by the policyholder. The policyholder pays single or regular (usually monthly) premiums to the life company, who invests them in the markets with the aim of generating sufficient capital to pay the death/maturity benefits.

To achieve a return, the life office invests the premiums received from its many with-profits policyholders in the mix of investments it thinks is most appropriate. These include equities, debt securities, property and cash: in some cases, it can also include other assets, such as holdings in hedge funds, foreign currencies and other alternative investments. The portfolio is generally constructed so as to avoid too high a degree of risk.

The policyholder receives a basic sum assured plus a share in any investment profits made by the life company. These profits are shared by way of bonuses:

- reversionary bonuses which are added each year and, once paid, cannot be withdrawn, and
- terminal bonuses which are awarded on maturity or earlier death.

The policy provides built-in life cover (which can be used to assure repayment of a mortgage in the case that the policyholder dies).

The return (by way of bonus) on a with-profits bond is 'smoothed' by the life company. That is, in years when the underlying portfolio performs well, the company will hold back some of the gains, and will allocate them to policyholders to boost their returns in years when performance is poor. Policyholders should experience lower volatility than with a regular investment.

With-profits policies may be unitised. Unitisation simplifies the life office's communication of performance, since a unit price can be published, so policyholders can monitor the growth in their investment. In addition, bonuses can be added by adding new units to a policyholder's account.

7.1.4 Distribution Bonds

Distribution bonds are single premium investment policies. Unlike unit-linked bonds, distribution bonds effectively distinguish between income and capital so that the actual income paid reflects the income generated by the fund and so leaves the capital intact.

To qualify for inclusion in the **Association of British Insurers (ABI)** Distribution Fund sector, the fund must have an equity content not exceeding 60% before deduction of management charges. All income must be capable of being paid to the investor.

Although traditionally viewed as a legacy product, distribution bonds have seen renewed interest in the current income-focused environment, and some providers are exploring updated offerings to meet demand for tax-efficient income solutions.

7.2 The Tax Treatment of Onshore Bonds

Investment bonds have a different tax treatment to other investments, which can lead to some valuable tax planning opportunities.

The fund that has issued the life assurance bonds has already been subject to tax at the basic rate; in other words, fund income that is not already taxed in the UK (eg, interest, property income) is taxed at the fund level at 20%. Capital gains are also subject to the same level of tax. Hence, any further proceeds from the bonds to investors do not carry personal liability to income tax or CGT.

Essentially, note that an investor can withdraw up to 5% each year of the amount paid into the bond without paying any tax on it. This allowance is cumulative so any unused portion of the limit can be carried forward to the future. The maximum limit to this carry-over allowance is 100% of the amount paid into the bond. Higher and additional rate taxpayers are liable for tax above the basic rate, but they can defer their withdrawals to a time when they retire and have a lower tax position.

However, advisers should bear in mind that certain events during the life of the bond may trigger a potential liability. Tax liability can arise if any of the following chargeable events occur:

- **D**eath.
- **A**ssignment for money or money's worth.
- **M**aturity.
- **P**artial surrender (over a specified limit).
- **S**urrender.

We deliberately put them in this order, as a way to remember the chargeable events is to recall the acronym 'DAMPS'.

When a chargeable event occurs, a chargeable gain is calculated as follows:

- If partial withdrawals have been made, then the chargeable gain is calculated as at the end of the relevant policy year, at the point when they can be totalled. The chargeable gain is the sum by which the total withdrawals in the period exceed the allowance available (ie, 5% for the current year plus any unused allowances from previous years, carried forward).
- When the policy is finally encashed, the total value at that point is added to the total of any withdrawals made previously. From this sum, the initial premium invested is deducted, plus any previous chargeable gain. The net result is the final chargeable gain.

This sum is taxable as if it were an addition to the policyholder's income. However, since basic rate tax has already been deducted, it is given a tax credit. It is only higher and additional rate taxpayers (or basic rate taxpayers whose income is taken into the higher rate bracket by the chargeable gain) who have any further liability.

If the addition of a chargeable gain to a policyholder's income takes them over the threshold into the higher rate band, then a principle known as 'top slicing' can be used to mitigate the ensuing tax liability. With top slicing, the chargeable gain is divided by the number of relevant years, to produce an average gain. This is treated as the top slice of income in the tax year in which the gain actually arises. If any tax is payable on that top slice, it is then multiplied by the number of relevant years, and the result is the total arising income tax liability.

When calculating the chargeable gain, any starting rate for savings and the personal savings allowance should be considered – these are covered in more detail in section 1.2 of chapter 4.

Recall that the personal allowance is reduced by £1 for every £2 of income above the £100,000 limit. However, income from an investment bond is not counted as income for this purpose, so it does not trigger the reduction of the personal allowance. This allows individuals to retain the full benefit of their personal allowance.

Top Slicing Example

Matt and Ben are twins. In 2025–26, Matt earns £33,000 a year after the deduction of his personal allowance, whereas Ben earns £37,000 a year after the deduction of his personal allowance. They both took out onshore investment bonds eight and a half years ago, each investing £100,000.

They have both been taking 5% of this original investment at the start of each year as they have been told there will be no tax to pay on it immediately. The bonds are now both worth £67,000 and they have decided to encash them.

Matt		Ben	
Cash-in value	£67,000	Cash-in value	£67,000
Add 5% withdrawals of 9 x £5,000	£45,000	Add 5% withdrawals of 9 x £5,000	£45,000
Less original investment	(£100,000)	Less original investment	(£100,000)
Chargeable gain	£12,000	Chargeable gain	£12,000
The gain has been made over eight full years so can be 'sliced' by eight: £12,000 / 8 = £1,500 slice. This slice is added to Matt's taxable income of £33,000, making a total income for the year of £34,500. This is within the basic rate band of £37,700, so the full gain is taxed at the basic rate and Matt has no further liability. Since Matt is a basic rate taxpayer after including the full gain, he qualifies for the personal savings allowance (PSA). However, because no part of the gain is pushed into the higher-rate band, there is no further tax liability on the bond gain, even without relying on the PSA.		The gain has been made over eight full years so can be 'sliced' by eight: £12,000 / 8 = £1,500 slice. This slice is added to Ben's taxable income of £37,000, making his total income for the year £38,500. This is £800 above the basic rate band of £37,700, so £800 of the gain is potentially taxable at 20%. However, consider Ben's eligibility for the PSA. With a taxable income of £38,500, Ben is a higher rate taxpayer so he qualifies for a PSA of £500; the excess of £300 is taxable at 20%, resulting in an additional tax on the slice of £60. Since the policy was held for 8 full years, this tax must be multiplied by 8 to calculate the total tax liability on the gain under top-slicing relief: £60 × 8 = £480.	

7.3 The Main Types of Offshore Investment Bonds

The following assets may be held within an offshore bond wrapper:

- cash deposits and money market funds
- equity or fixed interest funds, but not direct equities, and
- capital guaranteed investments, or alternative investments such as hedge funds.

The main benefits of an offshore bond are:

- Income and growth accumulate within the bond free of income and capital gains tax.
- Withdrawals of up to 5% per annum may be made without incurring an immediate tax liability. This is cumulative and, if unused, may be carried forward to future years.
- Bonds may be gifted without crystallising a tax charge.
- Upon encashment of the bond, gains are subject to income tax only which is levied only at the investor's marginal tax rate in the year of encashment, potentially lowering the tax liability.
- Offshore bonds are suitable for individuals with long-term investment horizons and a possible need for regular distributions.

Offshore bonds are offered in locations such as the Isle of Man, Dublin and Luxembourg. Offshore life companies may offer some variants such as the following:

Portfolio Bonds	Capital Redemption Bonds
• Usually offered to wealthier investors. • Allow policyholders to select their own underlying investments or to choose a particular fund manager to run the portfolio (rather than buying units in the insurance company's various funds). • An existing portfolio of shares may be used as the premium for the bond, although this may give rise to a CGT liability. • Operate in all other respects like a normal bond; however, benefits paid on maturity, death or encashment depend on the value of the portfolio (not the value of units in which the bond is invested). • Not tax efficient for UK investors. Often used by overseas residents.	• Life company products without an insurance element (ie, there is no life assured). • Instead, they are used purely for investment purposes, so they only pay out on the expiry of the bond or an early encashment by the policyholder.

7.4 The Tax Treatment of Offshore Bonds

Similarly to onshore bonds (the tax treatment of which is discussed in section 7.2), offshore bonds allow 5% withdrawals and top-slicing relief. The key difference is that onshore bonds assume that 20% has been deducted from the income, while offshore bonds have no such deduction.

Top Slicing Example (Continued)

Continuing with the example for Matt and Ben, had they actually both taken out offshore investment bonds then they would have had the following tax liabilities:

Matt	Ben
Slice = £12,000 / 8 = £1,500 Total taxable income = £34,500 Matt's total taxable income for the year is within the basic rate band, so the entire slice is taxed at the basic rate: £1,500 x 20% = £300. We multiply this by the number of full years, which gives a total tax liability of £2,400 (ie, £300 x 8) following encashment.	Slice = £12,000 / 8 = £1,500 Total taxable income = £38,500 Ben's total taxable income for the year is £800 above the basic rate band. The slice of £1,500 is then taxed as follows: • Basic rate: £750 x 20% = £150 • Higher rate: £800 x 40% = £320 • Total tax on the gain: £470 Multiplying this by the number of full years gives a total tax liability of £3,760 (ie, £470 x 8) following encashment.

Also in contrast to onshore bonds, offshore bonds offer growth on their funds that is largely free from income and capital gains tax, provided that-the-money is not brought into the UK. Any gains 'roll up' within the fund, without any immediate tax charges applying.

Investors only pay income tax on the chargeable gain when they encash part or all of the bond; their liability to tax will depend on their personal tax and residency circumstances at that time. Hence, investors must be aware of the tax regime in which they are resident at the time of encashment.

7.5 Other Life Insurance Products

In this section, we will concentrate on the purpose and key features of life assurance that are not necessarily regarded as investment products, but can offer clients peace of mind, by helping to ensure that their debts or loved ones are financially taken care of in the event of their death.

7.5.1 Term Assurance

Term assurance is the most basic and cheapest form of life assurance that provides cover (the 'sum assured') at a fixed rate of premium payments for a specific period of time (the term of the policy).

The sum assured will be paid out only if the life assured dies during the agreed term. If they do not, no payment is made, as generally there are no surrender or cash-in values. The policy then expires.

These are the seven types of term assurance policy:

- **Level term assurance** – the sum assured does not vary during the policy term and once the term expires, the policy expires with (normally) no value. It is a cheap form of basic cover.
- **Increasing term assurance** – similar to level term, except the sum assured increases. This increase is generally applied annually, but for some policies, it takes place after a longer set period.
- **Renewable term assurance** – this provides the opportunity for the life assured to take out a further term assurance at ordinary rates without requiring further evidence of health.
- **Convertible term assurance** – this allows the life assured to convert the policy to a whole-of-life or endowment assurance contract. This conversion can take place at any time during the policy term and there will not need to be any further evidence of health.
- **Decreasing term assurance (DTA)** – these policies have a sum assured which reduces each year by a given amount, decreasing to zero at the end of the term, but the premium remains level.
- **Family income benefit (FIB)** – a form of DTA, designed to provide the beneficiaries of the policy with regular income payments. The policy will pay a selected level of (tax-free) income each year, from the death of the life assured until the expiry of the term of the policy.
- **Unit-linked term assurance** – these policies only pay the sum assured on the death of the life assured during the term. Each month, the premiums are used to buy units in an investment fund (which could be a default fund chosen by the insurer or a range of funds available for selection); a portion of these units is then 'cancelled' each month to cover the cost of life insurance coverage. The remaining units are left in the fund(s):
    - If the units outperform the market, it is possible the sum assured may be increased at no extra cash, or the premium may be reduced while maintaining the same sum assured. Alternatively, a cash value may build up and become available to the life assured at the end of the policy term.
    - If the units underperform, a policy review may lead to the premium having to be increased in order to sustain the existing sum assured. Alternatively, the premium remains the same but the sum assured is decreased.

7.5.2 Whole-of-Life Assurance

Whole-of-life policies will result in the sum assured being paid on the death of a life assured, whenever that is, and providing the premiums are up to date.

Due to the permanent nature of the cover and the certainty of a claim as long as premiums are maintained, the premiums are more expensive than for term assurance policies. Whole-of-life policies can also build-up cash-in values, although these can be very low (particularly in the early years). Certain whole-of-life policies have been established more as investment than protection vehicles and we will look at them later in this section. For the time being, we will put the emphasis on protection.

There are four types of whole-of-life assurance policies as shown below:

- **Non-profit whole-of-life policies** – these policies have level premiums, payable throughout the life assured's life. They pay out a fixed sum assured, whenever death occurs.
- **With-profit whole-of-life policies** – these offer the opportunity for the sum assured to be increased by the addition of bonus payments. Reversionary bonuses are added regularly, additionally, a terminal bonus may be added when the policy comes to the claim stage. These bonuses are not guaranteed, though – the level depends on the performance of the life office and its funds, assets and liabilities.

- **Low-cost whole-of-life policies** – these are products sold as one policy, but in effect are a combination of a with-profit whole-of-life policy with a DTA. The policy will pay out a full sum assured on early death, based on the combined value of the two elements. Longer term, the bonuses added to the with-profit element will increase the payment from that element, while the DTA sum assured is reducing.
- **Unit-linked whole-of-life policies** – the same basics apply as to a unit-linked term assurance policy.

7.6 Endowment Assurance

Endowments combine life cover over a specific term (like term assurance), with the guarantee that there will be some kind of payment (like whole-of-life assurance). They provide a steady mix of protection and investment and are the most expensive form of assurance.

Endowments have a poor reputation in the marketplace, largely due to many policies being sold in the 1980s and early 1990s to repay interest-only mortgage debts. Despite the fact that ultimate cash-in values are very rarely guaranteed on any form of endowment, there were many clients who were not informed of this fact. You can imagine their surprise when many received a letter from their life office informing them there was likely to be a shortfall in their endowment funding, so they would not be able to fully repay their mortgage if they kept premiums at the existing level. The 'endowment mis-selling scandal' then followed.

Endowments are still sold because they have some advantages. However, the word 'endowment' is so tarnished that it is rarely used in the product name with alternatives such as 'regular savings plans' proving more acceptable.

Five types of endowment assurance policies are:

- **Non-profit endowment policies** – the most basic form with level premiums and a pay-out of only a fixed guaranteed sum assured on maturity or early death. These policies are rarely sold.
- **With-profit endowment policies** – these policies guarantee that the sum assured will be paid out on death or on maturity at the end of the term. Additionally, there are likely to be reversionary bonuses added during the term and a terminal bonus at maturity.
- **Low-cost endowment policies** – these policies operate in the same way as low-cost whole-of-life plans, with a with-profit endowment element and a DTA element operating under one structure. They guarantee to pay out the full sum assured on death. However, there is no such guarantee on the maturity of the plan, as that will depend on the bonuses added to the with-profit endowment element throughout the term. They often rely substantially on the terminal bonus pay-out to determine whether the amount required will be met.
- **Low-start endowment policies** – these policies are a development of low-cost endowments, but have a lower initial premium. The premium rises over time and then settles at a higher figure than would have been the case under a low-cost endowment for the remainder of the term.
- **Unit-linked endowment policies** – these policies operate in the same way as the unit-linked policies that we have already covered. The fund choice selection is often wider than for whole-of-life policies, as it is more of a pure investment product.

8. Private Equity

Learning Objective

5.7.1 Understand the main types, purposes, structures, tax treatment and investment characteristics of private equity funds

Private equity (PE) funds typically invest in companies which are not listed on a stock exchange. Investors in PE are typically more sophisticated and/or wealthy, and can accept the additional risks of this type of investment. Typically, fund managers take an active role in the management of the companies they invest in – perhaps having a majority shareholding and/or a seat on the board. They look to add value for their investors by transforming the way the investee company is managed and may aim to make their money by floating the company on the stock market again after a few years, once the company's performance has been improved.

8.1 Types of PE Funds

There is a wide spectrum of activities carried out by a PE firm. They can invest in early-stage ventures, such as seed capital and start-ups, and expansion of early-stage investments and buyouts.

The basic types of PE funds include the following:

- **Bootstrap funding** this refers to the practice of entrepreneurs using personal savings or resources to fund their business without relying on external investors or loans. It minimises the need for debt or equity financing, often involving personal credit or loans, and gives founders more control over their business decisions. While it carries high risk due to the lack of external financial support, it also provides greater freedom to develop the company without external influence.
- **Venture capital (VC)** is investment provided to early-stage, high-potential companies that are looking to grow rapidly. Typically, VC comes from institutional investors or high-net-worth individuals (HNWIs) who pool their resources together in exchange for equity in the company. VC investments are highly risky, as they target companies with limited operating history. In return for this risk, venture capitalists often gain control over key company decisions and stand to receive significant returns if the company succeeds, through events such as an IPO.
- **Leveraged buyouts (LBOs)** involve PE firms acquiring a company using a significant amount of borrowed money, which is secured by the company's assets. These transactions are often used to acquire profitable and growing companies or take public companies private. The goal is to enhance the company's value and profitability over time, often by improving operations or restructuring. LBOs can be used for management buyouts (MBOs), acquiring competitors or selling off parts of a business to make it more attractive to buyers. The use of leverage increases potential returns, although it also amplifies risk.
- **Mezzanine finance** involves subordinated debt or preferred equity, which sits between senior debt and equity in a company's capital structure. It is typically used by companies that need capital for expansion but cannot secure traditional loans due to high risk. Mezzanine financing is more expensive than senior debt because it carries a higher risk, as it is the last to be repaid in the event of a default. In exchange for the higher risk, mezzanine investors demand higher returns, often through interest payments and equity-linked options.

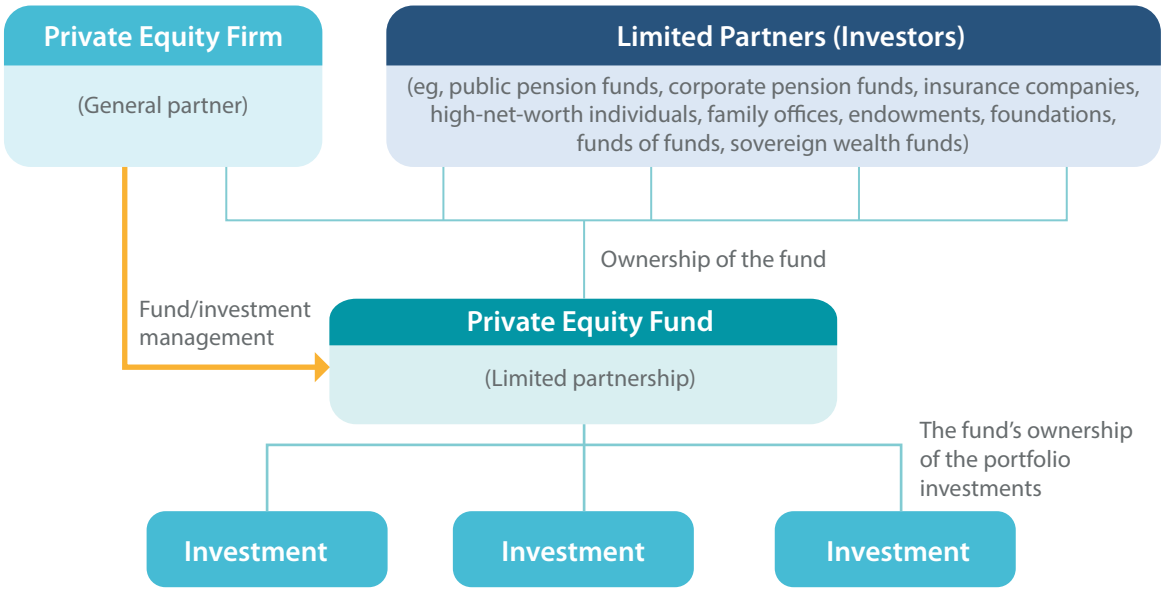
- **Growth capital** is equity or debt investment provided to relatively mature companies that are looking to expand or restructure their operations. These companies typically generate revenue and profits, but need additional capital to finance significant growth initiatives, such as entering new markets or acquiring other businesses. Growth capital investments are often minority stakes, so the original owners retain control of the company. These investments are designed to fuel transformational growth without the company giving up a controlling interest.
- **Crowdfunding** is a method of raising capital from a large number of individuals, typically through online platforms. It involves seeking small contributions from many people, either for equity, loan repayment, donation or rewards. There are four types of crowdfunding:
  - **Investment-based crowdfunding** allows individuals to invest in a business by buying shares or debentures.
  - **Loan-based crowdfunding** involves lending money in return for interest payments and repayment of capital over time.
  - **Donation-based crowdfunding** seeks donations for causes; and in return, investors may receive a reward.
  - **Reward-based crowdfunding** offers incentives that are linked to the project or cause, such as products or experiences.
  - Crowdfunding can offer high financial rewards, but it comes with significant risks. For example, investors may lose all their money if the business fails or if the crowdfunding platform goes bankrupt. Additionally, investments are often illiquid, with unlisted shares that are difficult to sell, and returns are not guaranteed. There is also the risk of dilution as companies issue more shares in future funding rounds. Investors should be aware that some types of crowdfunding are unregulated and that it can take time to see a return on investment.

8.2 The Structure of Private Equity Firms

PE firms are legally structured with limited liability partnerships (LLPs), made up of two classes of partners:

1. **General partners (GPs)**, or managing partners, have a great deal of technical experience and manage the entire PE investment process, including the day-to-day management of the assets under their management. For specialist advice and services, GPs retain the services of advisory consultants for a fee. Typically, GPs will receive a management fee of about 1.5–2.5% a year of the value of the fund, plus an incentive fee of 20% of carried interest or profits made by the fund (a structure often referred to as 'the 2–20 charges'). The incentive fee is triggered when the fund makes a profit that is greater than a predetermined hurdle rate.
2. **Limited partners (LPs)** are the investors in a PE structure, which may include pension funds, insurance companies and HNWIs. As the PE market has become more competitive, an increasing number of hedge funds and sovereign wealth funds (SWFs) – funded by governments with surplus reserves – have entered this space to access profitable deals. LPs are responsible for providing capital when called upon, paying the annual management fee, and receiving their share of the carried interest. The funds raised from the LPs are invested by the GPs in a range of investment projects. PE funds have a finite life of around ten years, which may be extended for another three years. Upon maturity the fund is liquidated and LPs receive their original principal investment plus any undistributed profits that accumulated throughout the fund's life.

The structure of a PE firm is often a limited liability partnership (LLP), which is a hybrid entity that offers tax transparency, legal personality, and management flexibility. In this structure, members (rather than shareholders) have the authority to bind the LLP. In the UK, this setup allows for a favourable tax treatment, and is often chosen for joint ventures and professional services firms.



Individual investors can obtain access to PE via closed-ended funds (eg, investment trusts). While some PE funds have lower minimum investment requirements, they do not necessarily have long track records to allow investors to compare one product with another. Investors should also be prepared to commit their money for the long term (ie, ten years or more), to benefit from the company's growth as it progresses from the acquisition phase, to profitability and eventual sale.

9. VCTs, EISs and SEISs

Learning Objective

5.8.1 Analyse the key features, relative merits and limitations of investing in venture capital trusts (VCTs), enterprise investment schemes (EISs) and seed enterprise investment schemes (SEISs) compared with other forms of direct and indirect investment: partners/investors; crowdfunding; investment management; tax characteristics; past performance in terms of risk and returns; discounts and premiums; secondary market liquidity

9.1 Enterprise Investment Schemes (EISs)

EISs are designed to help smaller, higher-risk trading companies to raise finance, by offering a range of tax reliefs to investors who purchase new shares in those companies.

To qualify for EIS funding, companies must follow a certain number of rules regarding the kind of company it is, the amount of money it can raise, how and when that money must be employed for the purposes of the trade and the trading activities carried on.

These rules include the following:

- the company must have a permanent establishment in the UK
- the company must be unquoted (ie, not traded on a recognised stock exchange) when the relevant shares are issued
- the company must not be controlled by another company, nor must there be any arrangements in existence for this to happen, at the time the shares are issued, and
- the company must not control another company, unless that company is a qualifying subsidiary.

Additionally:

- the company must carry on a qualifying trade or be the parent of a qualifying trading group
- the gross assets of the company (or of the whole group, if it is the parent of a group) cannot exceed £15 million immediately before any share issue and £16 million immediately after
- the maximum number of employees is 249 (or 499 for knowledge-intensive companies (KICs)
- the shares are issued within seven years from the date of the first commercial sale (or ten years for KICs), and
- the company can raise up to £12 million over its lifetime, or an enhanced £20 million for KICs.

The rules about not being controlled by another company, qualifying subsidiaries and the company carrying on the trade must be followed for a stated period, otherwise, investors will lose their reliefs.

Investors (ie, individuals and trustees of certain trusts) receive various tax reliefs as described in sections 9.1.1 to 9.1.5, when investing in EIS-qualifying companies. This is providing that they invest in fully paid ordinary shares that carry the full risk of ordinary shares and no preferential rights (which would otherwise protect the investor from the normal risks of investing in shares). While non-UK residents can invest in EIS companies, these reliefs can only be set against UK tax liabilities.

Further, these reliefs can only be claimed by investors who are not connected with the company. In other words, they must not control the company, or hold more than 30% of the share capital or voting rights, nor can they be an employee, director/partner or associate (or a relative of one).

9.1.1 Income Tax Reliefs

Income tax relief is given on investments of up to £1 million in an EIS-qualifying company, at 30% on the cost of the shares. This means a maximum tax reduction in any one year of £300,000 (assuming the individual had sufficient income tax liability to cover this). A further £1 million can be invested in KICs, thus increasing the total eligible investment to £2 million.

The relief can be set against the investor's income tax liability for the year in which the investment was made. However, it cannot be offset against dividend income, as the tax credit attached to a dividend is not recoverable.

The shares must then be held for at least three years (generally taken as the date that the shares were issued), otherwise, this relief is withdrawn.

An investor may carry back part or all of the amount invested and claim tax relief for the previous year, subject to the limits for relief for that year.

9.1.2 CGT Relief

Any gain on disposal will not be liable to CGT. This is provided the shares have been held for at least three years and qualified for income tax relief (which has not been withdrawn).

9.1.3 CGT Deferral Relief

If a gain is made on disposal of EIS shares, the CGT payment can be deferred if the gain is invested in shares of another EIS-qualifying company within one year before, or three years after, the gain arose. In this case, it does not matter whether the investor is connected with the company or not. There are no minimum or maximum amounts for deferral, nor is there a minimum period for which the shares must be held

9.1.4 Loss Relief

If the shares are disposed of at a loss, the investor can offset the loss (less any income tax relief given) against income for the year in which the shares were disposed of, or the year prior, instead of being set off against any capital gains.

9.1.5 IHT Relief

EIS shares qualify for business relief (BR). If they have been held for at least two years at the time of death, they can be left to beneficiaries free from IHT.

9.2 Seed Enterprise Investment Schemes (SEISs)

SEISs were launched in 2012, thus complementing the EIS scheme and supporting the then coalition government's growth agenda. SEISs were predominantly designed to stimulate entrepreneurship and to help small, early-stage companies (which may otherwise face barriers in raising external finance) to attract investment, thereby making it easier for these companies to become established and grow.

To qualify under the SEIS, a company must satisfy a number of conditions. These criteria largely mirror those for EIS-qualifying companies, although there are some differences:

	EIS	SEIS
Business	Carry on a qualifying trade or be the parent of a qualifying trading group	Carrying on, or preparing to carry on, a new qualifying trade
Gross assets	Up to £15 million (or £16 million immediately after the issue)	Up to £350,000
Number of employees	Up to 249 (or 499 for KICs)	Fewer than 25
Trading period	Trading for less than seven years (or ten years for KICs)	Trading for less than three years
Maximum lifetime amount	£12 million (or £20 million for KICs)	£250,000, and no previous investment from an EIS or VCT

Similarly to EISs, there are various tax reliefs available, as described in sections 9.2.1 to 9.2.3 below which again can only be set against UK tax liabilities of individuals and trustees of certain trusts. Like EISs, these reliefs can only be claimed by investors who are not connected with the company in terms of their financial interest or employment. The only difference is that SEIS guidelines do not consider directors as employed by the company. Hence, directors can apply for SEIS relief (provided they are not connected by financial interest).

Note that many EISs and SEISs use crowdfunding, which is covered in section 8.1 of this chapter.

9.2.1 Income Tax Relief

Income tax relief is given on investments of up to £200,000 at 50% on the cost of the shares (ie, a maximum tax reduction in any one year of £100,000, providing the investor has a sufficient income tax liability). Similarly to EISs, this relief can be set against the investor's income tax liability for the year in which the investment was made and 'carry back' also applies, so investors could potentially invest up to £300,000 if they use both years' allowances.

9.2.2 CGT Relief

If SEIS shares are sold for a profit, the gain will not be liable to CGT. This is provided the shares have been held for at least three years and they have qualified for income tax relief (which has not been withdrawn).

9.2.3 IHT Tax Relief

SEIS shares also qualify for BR, so they can be left to beneficiaries free of IHT if held for at least two years at the time of death.

9.3 Venture Capital Trusts (VCTs)

Venture capital trusts (VCTs) are designed to encourage individuals to invest indirectly in a range of small, higher-risk, unlisted, start-up companies that might otherwise have been unable to find the funding to grow.

As they are investment trusts, shares in VCTs are listed and traded on the stock exchange. Their prices are thus determined by supply and demand; and will, therefore, trade at a discount or premium to the VCT's NAV as based on a valuation of the holdings in its underlying portfolio.

VCTs are structured to provide investors with various tax reliefs (see sections 9.3.1 to 9.3.3), along with a measure of protection (ie, the diversification of a CIS). The reliefs are only available to individuals aged 18 years or over and cannot be claimed by trustees or companies, although there is nothing to stop them from holding VCT shares.

As VCTs attract special tax advantages, they need to gain HMRC approval to be treated as such. Once approved, VCTs are exempt from corporation tax on any gains arising on the disposal of their investments.

9.3.1 Income Tax Relief

Income tax relief on investments of up to £200,000 at 30% on the cost of the shares can be claimed. This can be set against any income tax liability that is due, whether at the basic, higher or additional rate. This relief can only be claimed for purchases of new ordinary shares and they must have been held for at least five years, otherwise, the relief is withdrawn.

9.3.2 Dividend Relief

There is no income tax to pay on dividends from ordinary shares in VCTs. This relief is available on both newly issued and second-hand shares (ie, those bought on the stock exchange in the secondary market).

9.3.3 CGT Relief

If the VCT shares are sold for a profit, the gain will not be liable to CGT. Again, this relief is available on both newly issued and second-hand shares.

9.4 Summary of the Tax Reliefs: EISs, SEISs and VCTs

To summarise the reliefs available on EISs, SEISs and VCTs:

	EISs	SEISs	VCTs
Income Tax			
Maximum investment	£1 million, plus £1 million in KICs	£200,000	£200,000
Tax relief	30%	50%%	30%
Minimum holding period	Three years	Three years	Five years
Carry back	Yes	Yes	No
Dividends	Taxable	Taxable	Exempt
CGT			
CGT relief	Gains exempt after three years	Gains exempt after three years	Gains exempt
CGT deferral relief	Yes	No	No
Loss relief	Yes	No	No
CGT holiday	No	Yes	No
IHT			
IHT relief	Yes	Yes	No

9.5 Performance Characteristics (Risk versus Reward)

EISs, SEISs and VCTs can provide very rewarding opportunities for investors – in part because start-up and developmental/growth companies can, in the right conditions, produce significant growth and, in part, because the gains and income are not subject to the same tax drag as less favourably treated investments.

However, because of their nature, they also involve a high level of risk. For example:

- The companies in which EISs, SEISs and VCTs invest are not listed, so it may be difficult to sell those companies in order to take advantage of better opportunities, (ie, liquidity risk).
- Smaller companies are generally more vulnerable to market or economic downturns, and their share prices may be disproportionately affected by market sentiment. They may also be very sensitive to changes in interest rates (especially if they have high levels of borrowing).
- In some (but not all) cases, they may have relatively young and inexperienced management teams and their lack of track record may mean that the best decisions are not always made.

10. Derivatives

Learning Objective

5.9.1 Understand the purposes, structure and risk/reward characteristics of the main types of financial derivatives pertaining to each main asset class: futures; forward contracts; options; warrants; contracts for differences

5.9.2 Understand the effects of implementing simple derivatives strategies for the purposes of hedging or speculation in terms of: risk transfer and risk/reward pay-off; transaction costs and margin; ease of implementation and unwinding

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Derivatives are financial contracts (set between two or more parties), the value of which is derived from an underlying asset, group of assets or benchmark – eg, options, futures and contracts for differences (CFDs).

These instruments have a major role to play in the investment management of many large portfolios and investment funds, and are used for:

- **Hedging** – a technique to reduce the impact of adverse price movements to mitigate risk.
- **Arbitrage** – the process of simultaneously buying and selling the same asset in two different markets, where a temporary price difference exists, thus locking in risk-free profits.
- **Speculation** – only initial margin (and not the full notional value of the contract) is payable by the counterparties at the point of opening their respective positions, so derivatives provide an ideal means by which to speculate on the direction of movement in a range of markets.
- **Anticipating future cash flows** – eg, if a manager expects to receive a large inflow of cash to be invested in a particular asset then futures can be used to fix the price at which it will be bought and offset the risk that prices will have risen by the time the cash flow is received.
- **Asset allocation change** – these changes, whether to take advantage of anticipated short-term directional market movements or to implement a change in strategy, can be made more swiftly and economically using futures than by adjusting the underlying portfolio.

Consequently, derivatives should be regarded as specialist investments to be used only by experienced investors when the risks of using them are fully understood and accepted.

10.1 Futures and Forward Contracts

Derivatives are not a new concept, as they have been around for hundreds of years. Their origins can be traced back to agricultural markets where farmers needed a mechanism to guard against price fluctuations caused by gluts of produce and drought. These contracts provided certainty in trade and became widely popular, but there was no formal market for trading them.

This led to the opening of the world's first derivatives exchange, the Chicago Board of Trade (CBOT), in 1848. The exchange soon developed a futures contract that enabled standardised qualities and quantities of grain to be traded for a fixed future price on a stated delivery date. Unlike the forward contracts that preceded it, futures contracts could itself be traded. They were subsequently extended to a wide variety of commodities and offered by an ever-increasing number of derivatives exchanges.

10.1.1 Characteristics of Futures

A future is an agreement between a buyer and a seller. The buyer agrees to pay a pre-specified amount for the delivery of a particular quantity of an asset at a future date. The seller agrees to deliver the asset at the future date, in exchange for the pre-specified amount of money. A futures contract is, therefore, a legally binding obligation between two parties for one to buy and the other to sell a pre-specified amount of an asset at a pre-specified price on a pre-specified future date.

Example

A buyer agrees with a seller to pay $75 per barrel for 1,000 barrels of crude oil in three months.

The buyer might be an electricity-generating company wanting to fix the price it will have to pay for the oil to use in its oil-fired power stations, and the seller might be an oil company wanting to fix the sales price of some of its future oil production.

In this example, the oil quality will be based on the oil field from which it originates (eg, Brent Crude, from the Brent oil field in the North Sea). The quantity is 1,000 barrels, the date is three months ahead and the location might be the port of Rotterdam.

Most commodity contracts are settled physically. However, not all futures contracts require physical delivery of the underlying asset. (eg, financial futures are settled between the counterparties by cash on the monetary gain or loss to date), known as CFDs – see section 10.4.

The terms and conditions of a futures contract are standardised so that they can be traded on a derivatives exchange. Standardising the terms allows one investor to sell their future to another and so provide liquidity to the market. These standardised terms are known as contract specifications.

In summary, a futures contract has two distinct features:

- It is **exchange-traded** – for example on the derivatives exchanges like NYSE Liffe or the Intercontinental Exchange.
- It is dealt on **standardised terms** – the exchange specifies the quality of the underlying asset, the quantity underlying each contract, the future date and the delivery location. Only the price is open to negotiation.

Derivatives markets have specialised terminology that it is important to understand.

- **Long** – the alternative way to describe the buyer of the future. The long is committed to buying the underlying asset at the pre-agreed price on the specified future date.
- **Short** – the alternative way to describe the seller of the future. The short is committed to delivering the underlying asset for the pre-agreed price on the specified future date.
- **Open** – the initial trade. A market participant opens a trade when they enter into a future. They could be buying a future (opening a long position) or selling a future (opening a short position).
- **Underlying asset** – the asset that drives the value of the future. It is also referred to as the underlying security or, simply, underlying.
- **Basis** – the difference between the cash price of the underlying asset and the futures price.

- **Delivery Date** – the date on which the agreed future transaction takes place, so it represents the end of the future's life.
- **Close** – the buyer of a future can either hold the future to expiry and take delivery of the underlying asset or sell the future before the expiry date. The latter is known as closing out the position.

Example (Continued)

Staying with the example above, the buyer of the contract to purchase 1,000 barrels of crude oil at $75 per barrel for delivery in three months is said to go long of the contract, while the seller is described as going short. Entering into the transaction is known as opening the trade and the eventual delivery of the crude oil will close out the trade.

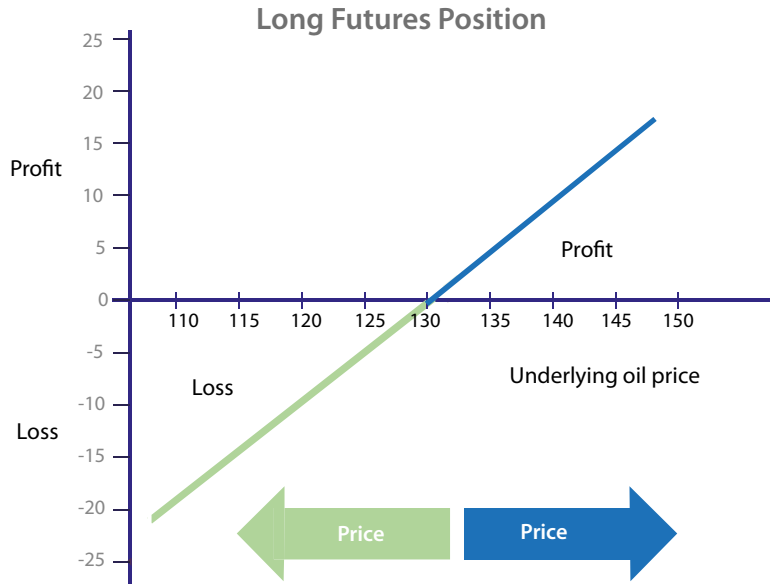
Most futures that are opened do not end up being delivered; instead, they are closed out.

An opening buyer will avoid delivery by making a closing sale before the delivery date. If the buyer does not close out, they will pay over the agreed sum and receive the underlying asset. This may be something the buyer is keen to avoid, (eg, because they are actually a financial institution simply speculating on the price of the underlying asset using futures).

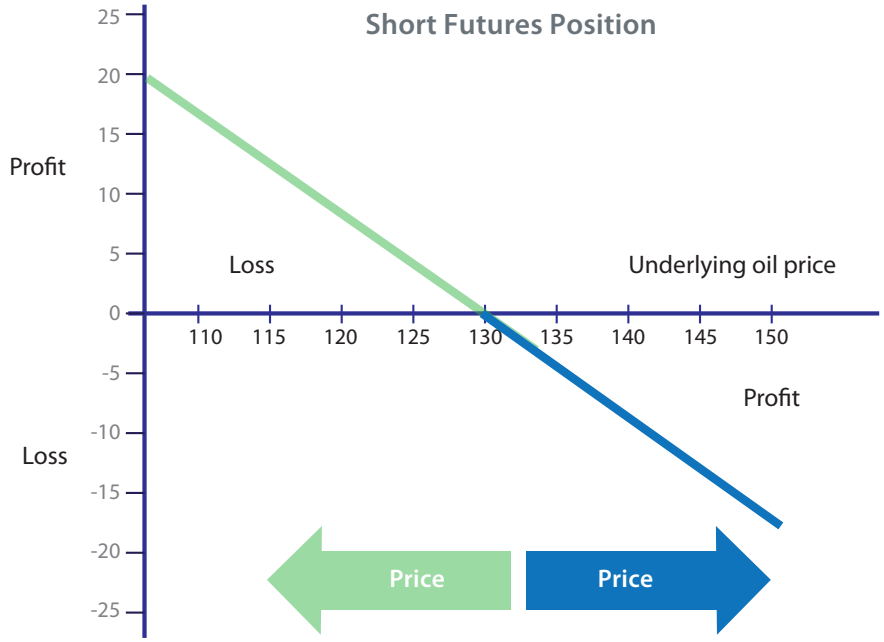
10.1.2 The Risk/Reward Profile of Futures

As we saw above, the buyer of the future is described as going long. In other words, the buyer is agreeing to take delivery of the underlying asset and hopes that the price of the underlying asset will rise.

As the following diagram shows, the long futures position makes money in a rising market and loses money in a falling market. In this example, a speculator believes the price of Brent crude oil will increase above its current spot price of $130 per barrel. If they are correct and the spot price moves to, say, $140 by expiry, then they would earn a profit of $10 per barrel on settling the contract. However, if the spot price actually falls to $120 by expiry, then they would have made a loss of $10 per barrel.



On the other hand, the seller of the future is taking a short position (ie, they are undertaking to make delivery of the underlying asset and hope that the price of the underlying asset will fall). As the following diagram shows, the short futures position hopes to make money in a falling market and loses money in a rising market.



From this, the long and short positions are mirror images of each other: if the long position gains, then the short position loses, and vice versa. For this reason, futures contracts are considered to be zero-sum games. In reality, most transactions are non-zero-sum games (in other words, the pay-outs to each respective party do not net out to zero) since the end result can be beneficial to all parties, or none at all. Moreover, the nature of the contract is known at the outset by both parties, but the final outcome is unknown due to the unpredictability of the market.

Given that futures are highly geared instruments, if the market moves against the speculator, losses can mount up very quickly. Indeed, following several high-profile disasters involving derivatives, most non-practitioners tend to think of futures solely as speculative instruments, used in the pursuit of making quick profits, which is not necessarily the case.

Whatever the perception, speculation per se should not be discouraged. Speculators add to market liquidity, so without them, those wishing to use futures to hedge risk would be unable to do so.

10.1.3 Hedging Using Futures

Unhedged positions are at risk from changes in the underlying asset price. The unhedged position may be a long underlying position, or it may be a short underlying position.

Hedgers offset the price risk in the underlying asset by taking an opposite position in the futures market. Someone long the underlying would sell the appropriate number of futures contracts to hedge the risk (a short hedge).

However, although the cash and futures prices are strongly correlated, there is some flexibility in that relationship. Basis changes will affect the performance of the hedge. This is termed the basis risk of the hedge.

For example, if a long gilt futures contract is used to hedge a portfolio of underlying gilts, any risk is limited to the basis risk (assuming that the appropriate number of contracts are entered into). The long gilt futures contract has a basket of deliverable gilts, one of which is cheaper to deliver than the others, this is known as (the cheapest to deliver CTD).

The CTD bond is the deliverable gilt with the highest implied repo rate. The implied repo rate is a measure of the funding cost implied in futures prices which reflect the difference between a bond's cash price and the price of a futures contract. The futures contract price is closely linked to the price of the CTD bond. As a result, the number of futures contracts used for hedging is calculated based on the assumption that the portfolio holds the CTD bond, not any other bond in the deliverable basket.

For many products, the number of contracts needed to hedge is simply a matter of dividing the portfolio size/value by the contract size/value. However, with bonds, the price factor of the CTD bond needs to be taken into account. The bonds that are typically delivered are the CTD bonds, which are delivered on the last delivery date of the month. Since the bonds that can be delivered can be slightly different in terms of the coupon or other characteristics, they are standardised through a system of conversion factors calculated according to the rules of the exchange. The conversion factor is used to equalise coupon and accrued interest differences of all delivery bonds.

The formula is:

Number of contracts = Price factor x Nominal value of CTD portfolio / Nominal value of the contract

Example

A portfolio of CTD bonds has a nominal value of £10 million and a market value of £11.5 million. The price factor is 1.1214645. The contract size of the long gilt future is £100,000 nominal. Thus, number of contracts needed to hedge is:

Number of contracts= (1.1214645 x (£10 million) / £100,000) = 112.15, or approximately 112.

Note that this will not be a perfect hedge, as it is not possible to trade a fraction of a contract.

If the investor did not have a portfolio of CTD bonds, the above formula would need to be adjusted.

When using futures to hedge an equities portfolio, its beta (β) is useful when calculating how many contracts need to be traded to be fully hedged.

Number of contracts = (Portfolio value x β) / (Contract size x Index value)

Example

If a portfolio has a beta of 1.1 relative to the S&P 500, this means that the portfolio would rise by 11% if the S&P rises by 10%. In other words, the portfolio is riskier than the index.

Therefore, if this portfolio has a value of $8 million and the manager wants to hedge this portfolio using S&P 500 futures, the portfolio's beta is useful in calculating the number of contracts required to fully hedge this portfolio.

At the time, the S&P 500 index was trading at 1600. The CME S&P 500 contract's size is $250 multiplied by the index. Thus, the number of contracts = $8 million / ($250 x 1600) = 20. However, we need to adjust this figure for the portfolio's beta: 20 x 1.1 = 22 contracts.

In the case of short-term interest rate futures, the size/tick value relative to a basis point is the key factor when determining the number of contracts required to hedge a specific position.

10.2 Options

The growth of options can be traced to the work of two US academics, Fischer Black and Myron Scholes, – who produced the Black-Scholes option-pricing model in 1973.

Until then, options contracts could not be easily priced which prevented them from being traded. The Black-Scholes model paved the way for the creation of standardised options contracts and the opening of the Chicago Board Options Exchange (CBOE) in the same year.

Options can still be traded either on an exchange or off-exchange (also referred to as over-the-counter (OTC)), in much the same way as forward contracts.

10.2.1 Characteristics of Options

An option gives a buyer the right, but not the obligation, to buy or sell a specified quantity of an underlying asset at a pre-agreed exercise price, on or before a pre-specified future date or between two specified dates. In exchange for the payment of a premium, the seller grants the option to the buyer.

As with futures, options have their own terminology that it is important to understand:

- **Call option** – an option that gives the buyer the right, but not the obligation, to buy an underlying asset.
- **Put option** – an option that gives the buyer the right, but not the obligation, to sell an underlying asset.
- **Holder** – the buyer of an option, also referred to as the long position.
- **Writer** – the seller of an option, also referred to as the short position.
- **Premium** – the price paid for an option.
- **Strike price** – the price at which the underlying asset may be bought or sold, also referred to as the
- exercise price.

- **At-the-money** – a call or put option whose strike price is the same as the current price of the underlying asset.
- **In-the-money** – a call option whose strike price is below the current price of the underlying asset (vice versa for a put option) and so, if exercised, will result in a profit.
- **Out-of-the-money** – a call option whose strike price is above the current price of the underlying asset (vice versa for a put option) and so, if exercised, will result in a loss.
- **Expiry date** – the last day of the option's life.
- **American-style option** – an option that may be exercised at any time during its life up to and including the expiry date.
- **European-style option** – an option that may be exercised on its expiry date only.
- **Asian-style option** – an option whose pay-off depends on the average price of the underlying asset over a certain period of time, rather than the price at maturity, as per European and American style options. For this reason, they are also called average options.
- **Bermudan-style option** – an option that can be exercised on predetermined dates before expiry, usually once a month. Such options are a combination of American- and European-style options, thus are hybrid securities.

The two parties to an options contract are the holder and the writer. The writer confers the right, rather than the obligation, to the holder to either buy or sell an asset at a pre-specified price in exchange for the holder paying a premium for this right. This premium represents a fraction of the cost of the asset or the notional value of the contract. Options, therefore, differ from futures in that a right is conferred in exchange for the payment of a premium (not an obligation).

As the holder is in possession of a right, the holder does not have to exercise this right if the transaction ultimately proves not to work in their favour. The option can simply be abandoned with the loss of the premium paid. The writer, however, is obliged to satisfy this right if taken up (ie, exercised) against them by the holder. Potentially the writer has an obligation to deliver the asset to the holder of a call option at the exercise price if the option is exercised. Alternatively, the writer could be required to take delivery from the holder of a put option if exercised.

All that the holder can lose is the premium paid. As a result, only the writer is required to make initial and variation margin payments to the clearing house:

- **Initial margin** is a good faith deposit (perhaps in the form of collateral rather than cash) that is paid in order to protect a party to a contract in the event that the other party defaults. It is returned when the position is closed out.
- **Variation margin** is a variable margin payment made by clearing members, which reflects the daily change in the market value of the contract. It reflects the profit or loss of each counterparty compared to the previous valuation of the contract.

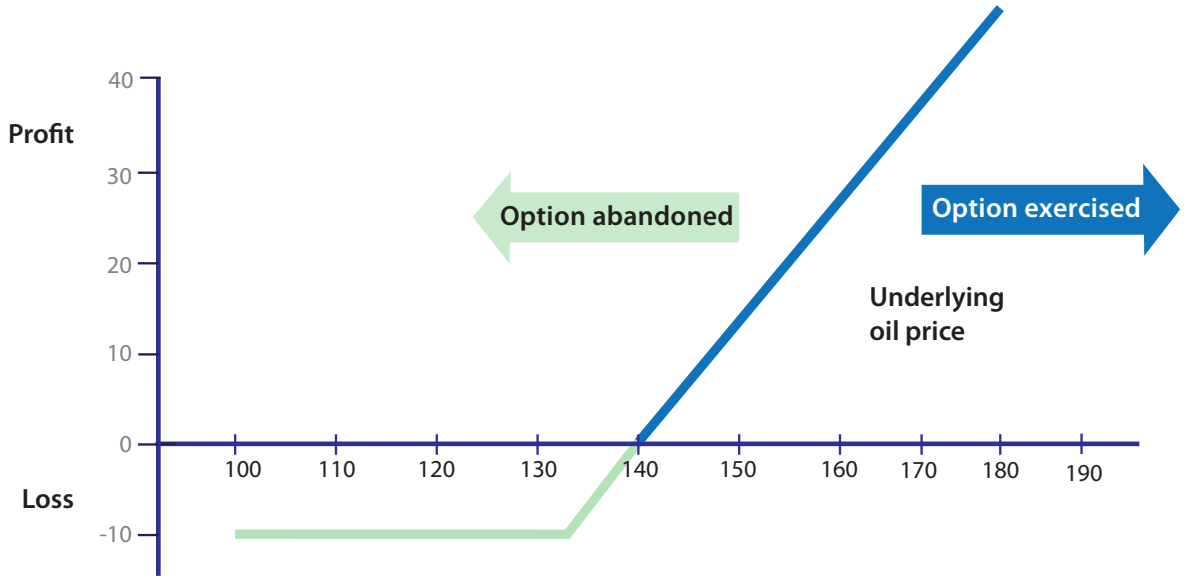
Most exchange-traded financial options are cash-settled rather than physically settled. Therefore, if exercised, the cash difference between the exercise price of the option and that of the underlying asset, rather than the asset itself, passes from the writer to the holder.

10.2.2 Option Strategies

In this section, we will consider four basic option strategies by looking at a call and put option from the perspective of the holder and the writer.

Call Options

Holders of a call option take a long call position, while writers of the same option take the opposite short call position. Using the same example as before, the holder pays a premium of $10 for the right to buy the underlying asset, Brent crude oil, at the strike price.



The higher the price of the underlying asset, the more profit the holder will make and vice versa. The potential risks and rewards for the long call position are:

- The maximum profit is unlimited.
- The maximum loss is limited to the premium paid, as the holder can abandon the option.

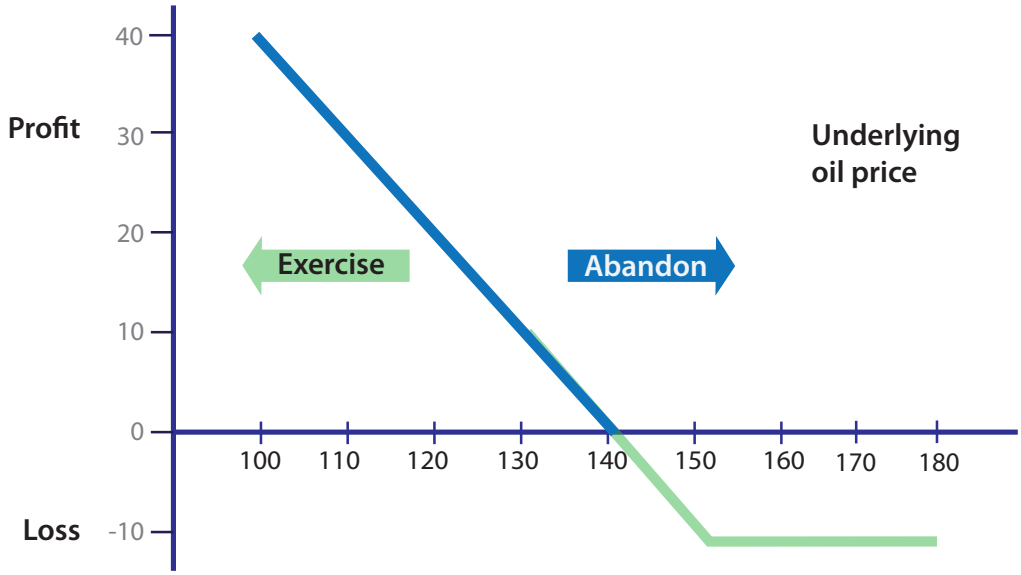
The writer clearly has a different perspective on the transaction: they are hoping the underlying share price will fall so that the holder will not exercise the option, but instead abandon it, as this will leave the writer with the premium that they have received from the holder.

The higher the price of the underlying asset, the greater the loss for the writer. As a result, potential risks and rewards for the short call position are:

- The maximum profit is the premium.
- The maximum loss for the writer is unlimited.

Put Options

Holders of a put option take a long put position, while writers of the same option take the opposite short put position. With a put option, the holder pays a premium for the right to sell the underlying asset on expiry if they wish. The more the price of the underlying asset falls, the more profit the holder will make.



The potential risks and rewards for the long put position are:

- The maximum profit is the strike price less the premium paid.
- The maximum loss is limited to the premium paid as the holder can simply abandon the option.

The writer will receive the premium but takes on the obligation to buy the underlying asset at expiry. From the perspective of the writer, therefore, they are hoping that the underlying asset price will not fall as expected so that the holder will abandon the option, thus leaving the writer with the premium. As a result, potential risks and rewards for the short put position are:

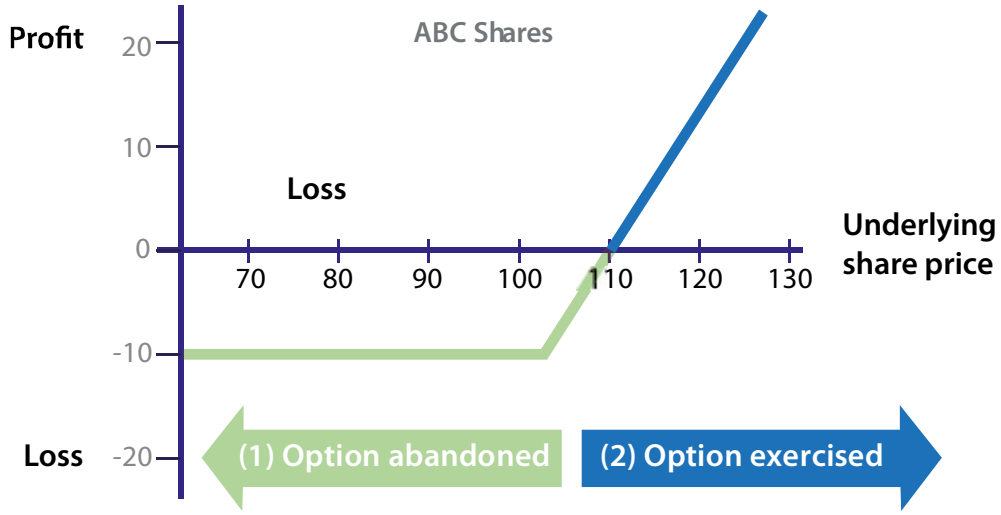
- The maximum profit is the premium.
- The maximum loss is the strike price less the premium.

10.2.3 At-the-Money, In-the-Money and Out-of-the-Money

We will expand on these definitions by looking at how they relate to a call and a put option.

Call Option

Assume an investor buys a call option on ABC shares at a premium of 10p and an exercise price of 100p and has the intention to buy the underlying share when the option expires.

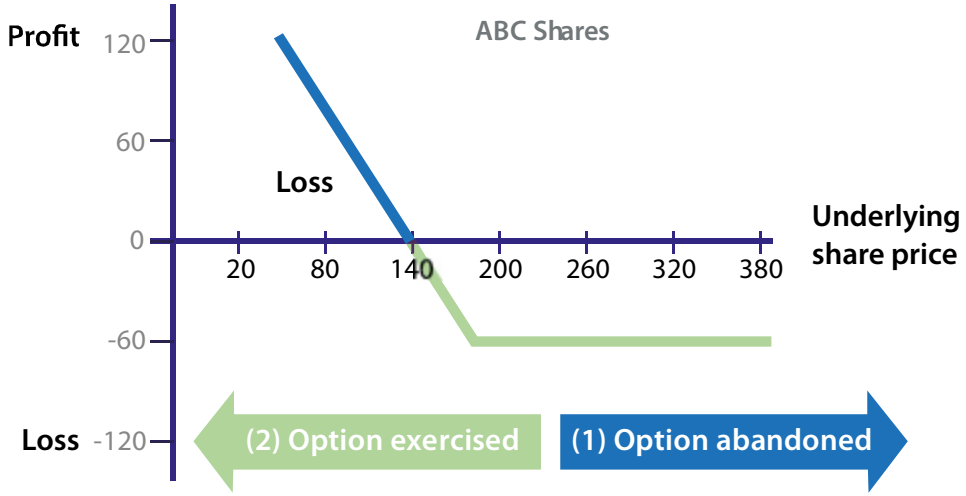


1. **At-the-money** – the underlying share price is the same as the exercise price.
2. **In-the-money** – if the underlying share price is above 100, the holder will exercise the option to buy the shares at 100.
3. **Out-of-the-money** – if the underlying share price is below 100, the holder will abandon the option and lose the 10 premium. Instead, they can buy the shares at a cheaper price.
4. **Break-even** – if at expiry the underlying share price is 110, the holder will break even as it costs 100 to buy shares plus the premium of 10.

Put Option

Assume an investor buys a put option on ABC shares for a premium of ¥60 which can be exercised at ¥200. They hold a share and have the intention to sell it in the future when the option expires.

The position will instead look as follows:



1. **At-the-money** – the underlying share price is the same as the exercise price.
2. **In-the-money** – if the underlying share price is less than 140, the holder can exercise their option to sell at 200.
3. **Out-of-the-money** – if the underlying share price is above 200, then the holder will abandon the option. Instead, they can sell their share at a higher price in the market.
4. **Break-even** – if, at expiry, the underlying share price is 140, the holder can buy the shares in the open market and exercise the option to sell at 200. Profit of 60 is offset by premium of 60.

10.2.4 Option Strategies

In this section, we will consider four basic option strategies by looking at a call and put option from the perspective of the holder and the writer.

10.2.5 Option Premiums

The premium for an option is made up of its intrinsic value and its time value.

- **Intrinsic value** – this is the difference between the exercise price and the current share price.
- **Time value** – an option with a long time to expiry will have a greater amount of time value incorporated into its price, so that the longer the period, the greater will be the time value.

Of the types of options discussed in section 10.2.1, **American-style** options are typically the most expensive, as they can be exercised at any time. **Bermudan-style** options typically have the lowest premiums, as they are the least flexible. We can consider this by looking at a simple example.

Example

A call option with the right to buy at 90 is trading at 30 when the underlying is trading at 100. The intrinsic value is 10 and the time value is the remaining 20.

In practice, the option premium will be affected by many factors including:

- **The underlying asset price** – the higher the asset price, the more valuable are call options and the less valuable are put options.
- **The exercise price** – the higher the exercise price, the less valuable are call options and the more valuable are put options.
- **Time to maturity** – the longer the term of the option, generally the greater the chance of the option expiring in-the-money; therefore, the higher the time value and the higher the premium for both call and put options.
- **Volatility of the underlying asset price** – the more volatile the price of the underlying asset, the greater the chance of the option expiring in-the-money, therefore, the higher the premium for both call and put options.

There are two other factors that will affect the option premium:

- **Income yield of the underlying asset** – the greater the income yield of the underlying asset, the greater the sacrifice being made by the call option holder by not holding this asset, but the greater the benefit to the put option holder. Therefore, the higher the income yield, the less valuable the call option and the more valuable the put option.
- **Short-term interest rates** – the higher the short-term interest rate, the greater the interest income received by the call option holder on the cash not committed to buying the underlying asset. This makes call options more valuable. However, the outlay on a put option not earning this higher rate of interest makes put options less valuable.

It should be noted that the effects of income yield and short-term interest rates on option prices are fairly minor in relation to the other factors.

10.2.6 Hedging Using Options

The four primary options positions (long call, short call, long put and short put) can be used as hedging instruments against an underlying position.

The efficiency of hedging using options is dependent upon the delta of the options' position mirroring the delta of the underlying position – in other words, creating a delta-neutral portfolio overall.

Delta is the sensitivity of an option premium to a 1% move in the underlying security price, measured on a scale of 0% to 100%. In vanilla options, it can be taken as a rough proxy for the likelihood that the option will eventually be exercised. Thus, a 0% delta applies only to an option which is imminently about to expire out-of-the-money, while a 100% delta applies to an option which is certain to be exercised in-the-money (ie, its price now moves in a linear fashion to the underlying security). A 50% delta option is considered at-the-money, so its premium will change at a rate of 50% of any change in the underlying price.

Example

Investor A owns a portfolio of FTSE 100 shares with a current value of £550,000, and the index currently stands at 7,405. Investor A is exposed to a fall in the value of the shares. To hedge the risk, Investor A needs an options position that will make a profit if the index falls – for example, a long put position.

If their worries are borne out and the index falls, the loss on the portfolio will be offset by the profit on the put option. Remember that the premium paid on the put will never be refunded, so the hedge has a cost (unlike a futures hedge).

However, if the index were to rise, the long underlying position can still show an overall profit once the cost of the put premium has been recouped.

How many contracts are needed to hedge?

The contract size of a FTSE 100 option on NYSE Liffe London is the index level x £10 per point.

With the put option exercise price at, say, 7,320 (choose the option with the strike price that is closest to the current index level of 7,405), each contract hedges £74,050 of shares (ie, 7405 x £10 per point).

Thus, the number of contracts needed = £550,000 / £74,050 = 7.43, or approximately 7 contracts.

10.3 Warrants

10.3.1 Characteristics of Warrants

Warrants are negotiable securities issued by companies that confer a right on the holder to buy (call warrant) or sell (put warrant) a certain number of the company's ordinary shares at a preset price on or before a predetermined date. Hence, call warrants are essentially long-dated options; and similarly to options, as there is no obligation for holders to buy or sell, their maximum loss is restricted to their initial investment.

Warrants are typically issued on a stand-alone basis although they can also be issued in conjunction with other securities (eg, bonds). Unlike convertible securities such as convertible loan stock or preference shares, ,the warrant itself can be traded separately from the underlying security..

Warrants are traded on stock exchanges and, if exercised, result in the company issuing additional equity shares which may dilute existing shareholders. The warrants market represents only a small portion of the broader global derivatives market.

Given the terms of the warrant issue, the conversion premium or discount can be calculated. The basis for calculating the conversion premium follows the same principles as convertible bonds and convertible preference shares which was covered in sections 2.3.2 and 3.2.2 respectively of chapter 1.

10.3.2 Covered Warrants

Covered warrants are warrants in a company's shares issued by an organisation other than the company itself – they are also called securitised derivatives. Issuers cover their issues by either shares in the company or warrants issued by the company. Investment banks usually issue covered warrants based on individual stocks, indices, currencies or commodities and in a different denomination or a different currency from the underlying asset. They can be either leveraged, as with individual stock options, or unleveraged, as with commodities.

As with an option, a covered warrant gives the holder the right to buy or sell an underlying asset at a specified price, on or before a predetermined date.

When the holder exercises their right they are exercising it against the issuer of the covered warrant rather than the company itself. Again, therefore, a holder's maximum loss is restricted to their initial investment.

A covered warrant gets its name from the fact that when issued, the issuer will usually buy the underlying asset in the market (ie, they are covered if they should need to deliver the underlying shares, and not exposed to the risk of having to buy them in the market at a higher price).

10.4 Contracts for Differences (CFDs)

CFDs are financial futures that are cash settled; in other words, they are settled in cash based on the monetary gain or loss at the settlement date.

The underlying may be designated in any asset class. The term has also been associated with another type of contract termed as 'retail contracts for differences'. They are created and marketed to individual investors, along with futures and options contracts on a range of indices.

An investor normally enters into CFDs with a derivatives broker, who is the counterparty – in the UK, the counterparty must be authorised under the Financial Services and Markets Act (FSMA) 2000. The investor can open a trade by either going long or short a CFD. Ultimately, this investor will be cash-settled on that trade when it is closed off with an offsetting trade.

Note that in several countries, such as the US and Hong Kong, CFDs are illegal, in order to protect retail investors, amid regulators' concerns about the amount of leverage that CFDs use to purchase the instruments they represent.

In other countries such as the UK, the sale, marketing and distribution of CFDs and certain other complex derivative products to retail investors is restricted. The aim of these rules is to protect consumers from large and unexpected losses, due to the inherent risks of these products, as well as poor conduct of the firms selling them.

In the UK, firms must limit the amount of leverage that retail clients are exposed to when they open a position to between 30:1 and 2:1. They must also provide protections to ensure that clients will not lose more than the total funds in their CFD account, as well as provide standardised risk warnings, among other requirements.

11. Hedge Funds

Learning Objective

5.10.1 Analyse the key features, relative merits and limitations of investing in hedge funds compared with other forms of direct and indirect investment: main types of hedge fund; regulatory environment; investment risk; use of short and long positions; custody and safekeeping practices; limitations in respect of voting capital; funds of hedge funds (FOHFs)

The term 'hedge fund' is a very wide one, with no precise legal definition. In general, it is taken to mean a type of fund which can engage in a wide range of investment strategies, many of them outside the strategies permitted for authorised schemes.

Hedge funds are often unregulated, although their operators (eg, the fund manager) will be authorised by the relevant regulator (eg, the FCA if they are in the UK). Within the hedge fund universe, there are a variety of recognised strategies, which we will cover in section 11.2.

Hedge funds can have a higher level of risk than traditional assets, but they also have the potential for higher returns. Their performance can often be uncorrelated to other asset classes for long periods of time. However, when a major event or shock occurs in the financial markets, then the correlation returns to other asset classes and can increase markedly – this was the case during the global financial crisis, the onset of the COVID-19 pandemic in early 2020, and the high inflationary environment in 2022–23.

Many hedge funds have high initial investment sizes, so access is effectively restricted to wealthy individuals and institutions. However, investors can also gain access to hedge funds through funds of hedge funds (FOHFs) and investment trusts of hedge funds.

The Alternative Investment Management Association (AIMA) is the global representative of the hedge fund industry. Membership comprises over 2,100 firms in over 60 countries that collectively manage over $4 trillion in assets[1] – members include hedge fund managers, fund of hedge funds (FOHF) managers, prime brokers, legal and accounting firms, investors, fund administrators and independent fund directors.

11.1 Hedge Fund Characteristics

The common aspects of hedge funds are:

- **Regulation** – hedge funds are usually domiciled in an offshore financial centre such as the Cayman Islands or Dublin and usually subject to a lighter regulatory regime.
- **Structure** – most hedge funds are established as an unregulated collective investment scheme (UCIS). They cannot be generally marketed to retail investors because they are considered too risky for the less financially sophisticated investor.
- **High minimum investment** – most hedge funds require minimum investments in excess of $100,000, and some are upwards of $2 million.

1 AIMA, 2025. AIMA in numbers. Retrieved from https://www.aima.org/about/aima-in-numbers.html (Accessed: March 2025)

- **Investment flexibility** – because of the lack of regulation, hedge funds are able to invest in a wider range of assets (subject to compliance with the restrictions in their constitutional documents and prospectus). In addition to being able to take long and short positions in securities, some take positions in commodities and currencies. Their investment style is generally aimed at producing absolute returns.
- **Dealing** – many hedge funds impose an initial lock-in period of between one and three years before investors may deal in the shares, so they can maintain their investment flexibility. Any dealing that takes place is usually only permitted at the end of each month or quarter.
- **Gearing** – many hedge funds use leverage and derivatives with the aim of enhancing their returns.
- **Liquidity** – to maximise the manager's investment freedom, hedge funds usually impose an initial lock-in period of between one and three years before investors can sell their investments.
- **Cost** – hedge funds typically levy an annual management fee of 2%, in addition to a performance-related fee of about 20%, if an absolute performance target in excess of the risk-free rate of return is met or exceeded and previous losses have been recovered. Although, increased competition within the hedge fund industry has recently led to 'fee compression', with managers of new funds now taking different approaches to charging their management fees, in contrast to the usual '2 and 20' approach. This compensation structure is being modified by a number of hedge fund managers towards a '1 or 30' structure, whereby hedge fund managers receive either an annual management fee of 1% or a performance fee of 30%.
- **Low correlation to world securities markets** – despite the greater concentration of their portfolio holdings, hedge funds may provide additional diversification when combined with conventional portfolios, owing to their lower correlation with world equity and bond markets.
- **Manager investment** – hedge fund managers generally invest some of their own wealth into their funds. This can reinforce the alignment of manager and investor interests.

Some hedge funds use 'empty voting' to manipulate shareholder vote outcomes. Empty voting involves the hedge fund borrowing the shares immediately prior to a record date, in order to acquire a large number of voting rights at low cost with practically no market exposure and returning the shares immediately after the record date. This practice is particularly favoured by activist hedge funds to boost their voting power, while also not committing too much money. Consequently, the beneficial ownership of the shares can be separated from the right to vote at shareholders' meetings.

11.2 Hedge Fund Strategies

Each hedge fund strategy aims to take advantage of a particular investment opportunity. Hedge fund strategies are often characterised by an investment style. While no two hedge funds are identical, most generate their returns using at least one of the common strategies outlined below.

- **Market neutral** – takes both long and short positions in mispriced (ie, undervalued and overvalued) securities, and thus neutralises the exposure to market risk.
- **Hedged equity** – also termed long-short funds. Long or net short bets are taken on equities, based on the manager's identification of mispriced securities. Portfolios are not structured to be direction-neutral as with market neutral funds; rather; based on the positions existing within the portfolio, the net exposure may have a long or short bias.
- **Arbitrage** – seeks to exploit price inefficiencies and anomalies by simultaneously buying and selling investments. As their names suggest, convertible arbitrage focuses on convertible securities (convertible bonds, convertible preferred stock and warrants) and fixed-income arbitrage on fixed-income securities.

Other types include:

- **Merger arbitrage** – after an announcement, the fund manager will create a position that seeks to extract more of a deal premium from a merger and acquisition situation. One common trade is to purchase the target company stock while selling the bidder company.
- **Relative value arbitrage** – takes advantage of perceived price discrepancies between highly-correlated investments, such as equities, commodities, options and currencies.
- **Statistical arbitrage (StatArb)** – based on a 'pairs trade' strategy and 'mean reversion' modelling (ie, a theory that asset prices eventually revert to their long-term average level). This strategy uses quantitative and computational techniques to put stocks into pairs based on fundamental or market-based similarities. The poorer-performing stock of the two is bought long, while the other is sold short.
- **Event-driven** – closely related to arbitrage strategies, as they seek to exploit pricing inefficiencies that may occur before or after a corporate event, (eg, a merger or bankruptcy).
- **Credit funds** – focus on credit (ie, debt instruments) rather than interest rates. Many managers sell short interest rate futures, among other securities, to hedge their interest rate exposure.
- **Distressed securities** – invest in companies that are close to bankruptcy on the view that the companies will be turned around.
- **Global macro** – takes views on global macro-trends and concentrates on major market trends. The hedge fund uses derivatives to gain exposure to the trends identified. Managed futures funds are often classified as global macro funds.
- **Emerging markets** – seeks out profitable investment opportunities in emerging or less-developed markets. Often, the absence of derivatives products and short-selling restrictions mean that the funds in this category are long in the underlying securities.
- **Quantitative (quant)** – relies on quantitative analysis (typically via technology-based algorithm modelling) to make investment decisions. Also referred to as black box funds, as investors usually have limited access to the specifics behind the investment strategy.
- **Multi strategy** – invest in a wide variety of strategies, with the aim of consistently delivering positive returns despite the directional movement of equities, interest rates and/or currencies.
- **Fund of Hedge Funds (FOHFs)** – the fund invests in a portfolio of hedge funds. The FOHF provides some interesting and unique benefits that are not found with other strategies. FOHFs were created to allow easier access to smaller investors:
    - **Economies of scale** – a single investment in a hedge fund could cost an investor several hundred thousand dollars (or the equivalent in their domestic currency). With the same amount of money, indirect investment into multiple hedge funds is possible in an FOHF. Further, a hedge fund company may provide their client with access to other hedge funds in their portfolio that are closed to new clients.
    - **Diversification** – since many hedge fund returns are uncorrelated, the investment in an FOHF may provide a larger diversified portfolio.
    - **Expertise** – hedge fund managers will have specialist skills, expertise and access to vital proprietary information that professional managers in traditional fund sectors may not have.
    - **Transparency** – the hedge fund industry is secretive, and for an institutional investor carrying out due diligence in a hedge fund, this process may use up significant resources. Investing in an FOHF could overcome this problem as the FOHF manager will perform due diligence on each of the hedge funds in its portfolio.

11.3 Hedge Fund Risks

Specific risks of hedge funds include:

- gearing is used widely
- settlement is OTC
- currency risk
- dealing delays
- illiquid investments
- lack of transparency
- fraud
- lack of independent trustee boards, and
- limitations in respect of voting capital.

As shown, hedge funds are reputed to be high risk. However, in many cases, this perception stands at odds with reality. In their original incarnation, hedge funds sought to reduce market risk. That said, there are now many different styles of hedge fund – some risk-averse, and some employing highly risky strategies. It is, therefore, not wise to generalise about them. The most obvious market risk is the same risk that is faced by an investor in shares: as the broad market moves down, the investor's shares also fall in value.

As a type of absolute return fund, hedge funds often use leverage, especially in arbitrage-style strategies. This form of flexibility, essential for amplifying the impact of the strategy, can create unique risks. In a hedge fund, leverage may be created through any of the following ways:

- Borrowing funds to create a larger position or sell short more securities than the original capital put into the security.
- Borrowing through a margin account.
- Using derivatives (eg, futures and options) that require initial margins to gain market exposure. The margin posted will be a fraction of the full cost that is required if the underlying security was purchased in the spot market.

11.4 Custody and Safekeeping Practices

The primary responsibility of a custodian is to ensure that the investor's assets are fully protected at all times, in order to minimise the risk of their theft or loss. Hence, it must provide robust safekeeping facilities for all valuables and documentation, ensuring that investments are only released from the custodian's care in accordance with authorised instructions from the client. By law, registered funds are required to use a custodian.

Many unregistered alternative funds also use a custodian. In the case of hedge funds, the custodian is a trust company or similar financial institution, who is responsible for holding and safeguarding the assets held by the hedge fund. By using a third-party custodian and separating the hedge fund manager from the physical assets, this helps to reduce the risk of fraudulent activity.

As well as safekeeping assets, custodians also provide services (among others) such as:

- making appropriate arrangements for delivery and receipt of cash and securities to support settlement of the investor's trading activities in that market
- collecting dividend income, interest paid on debt securities and other income payments in the local market
- monitoring and managing entitlements through corporate actions and voting rights held by the investor in the local market
- managing tax reclaims and other tax services in the local market
- ensuring that securities are registered and that transfer of legal title on securities transactions proceeds effectively, and
- ensuring that reporting obligations to the regulatory authorities, and to other relevant bodies, are discharged effectively.

12. Absolute Return Funds (ARFs)

Learning Objective

5.11.1 Analyse the key features, relative merits and limitations of investing in absolute return funds (ARFs) compared with other forms of direct and indirect investment: structure; income and capital growth; investment risk and return; expenses; capital protection; monitoring performance versus benchmark

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As noted in section 11.3 above, absolute returns are a subset of hedge funds. Further, the first iteration of a hedge fund (created in 1949 by Alfred Winslow Jones) was an absolute return strategy, and hedge funds were originally promoted as a genre of absolute return vehicles. An absolute return objective for an investment is a target set to achieve a positive return in a specified time frame, irrespective of market conditions. The return is not referenced to any external benchmark. On the other hand, traditional funds have a relative return objective.

Absolute return funds (ARFs) may be confused with hedge funds, in that their composition and exposures may be modelled on hedge fund products. However, ARFs are not exclusive products, available only to a privileged group of investors, but have more recently been rolled out to smaller retail investors. Essentially, they are promoted as an alternative to a hedge fund. Unlike hedge funds, they do not have to be domiciled offshore and may be fully UK-regulated.

The EU UCITS regime (which has been transposed into UK law following Brexit) significantly enlarged the range of investment instruments, notably allowing some use of derivatives. This makes it possible for some hedge fund managers and ARF managers to launch versions of their strategies in UCITS compliant wrappers, giving more investors access, but within the more controlling UCITS environment.

ARFs are evaluated relative to cash deposits, or a risk-free rate plus a specified spread to reflect the element of alpha risk taken. For example, the 'returns' objective for such a fund may be stated as *'achieve 20–25% regardless of the market conditions'* or *'SONIA plus 10%'*.

The compensation structure is similar to a hedge fund with a typical charge comprising two parts:

- A **management fee** – this is worked out as a percentage of the NAV per share which, for most funds, can be anywhere from 1–2% of the NAV.
- A **performance (or incentive) fee** – this ranges from 15–30% on any returns over the benchmark, subject to a high-water mark (ie, if the fund declined in value in any year, it has to recover the loss before any performance fee is paid).

Over the years, the FCA has expressed concerns about ARFs. For example, in 2016[2], the FCA assessed that it can be difficult for investors to assess how their investments had performed due to inappropriate benchmarks being used; and, in 2019[3], that fund objectives and investment policies are not always as clear and helpful to investors as they should be.

Regarding the latter, for funds describing themselves as 'absolute return', 'total return' or similar, the fund's objective must include additional statements that performance is not guaranteed and investors' capital is at risk.

12.1 Measuring Performance/Benchmarking Funds

The performance of ARFs is variable at best. A number available in the market have long/short exposures to a selected market index or its sector. Even though two funds may be classified under the same sector, their returns can be quite different – this is due not only to the variations in the make-up of portfolios, but also the directional sensitivities of the funds due to their exposures to long and short positions. ARFs with a short-selling component were primarily designed to exploit alpha opportunities during market downturns, but such a portfolio does not perform as well in an upward-trending market as a traditional long-only portfolio.

There is no asset-based monitoring for this sector, and performance comparisons are likely to be inappropriate given the diverse nature of the objectives of ARFs.

Advisers should note that analysis of historical performances of such funds is a specialised activity. The information for interpretation of performances is achieved by accessing information available from the sellers of the managed funds and data providers who specialise in collecting the prices obtained from the funds and fund of funds. Transparency of information and benchmarking issues present problems; and in recent years, there have been growing calls from investors to provide means to monitor hedge fund performances, in the same manner that traditional mutual funds are tracked. In the coming years, regulation on ARF products will likely improve, thus increasing transparency. However, issues of benchmark selection and construction and measurement are likely to persist for a while longer.

As a genre of alpha generation products, advisers should note that there are several biases of which overstate performance of ARFs. As this industry does not have to adhere to a regulated performance presentation standard, biases in the historical data can make it difficult to compare the relative merits and performances of candidates, leading to a distortion of data existing in the public domain.

2 FCA, November 2016. MS15/2.3: Asset Management Market Study, Final Report. Retrieved from https://www.fca.org.uk/publication/market-studies/ms15-2-3.pdf (Accessed: June 2025)

3 FCA, February 2019. Asset Management Market Study – further remedies. Retrieved from https://www.fca.org.uk/publication/policy/ps19-04.pdf (Accessed: March 2025)

The issue is further complicated by the fact that disclosure of this vital investor information by fund managers is voluntary.

There are no mandatory reporting standards in place, thus creating three main biases:

1. **Self-selection bias** – given that disclosure of information is not mandatory, managers can decide themselves whether they wish to disclose their results to a particular service that keeps historic records. Clearly, funds performing poorly may not participate and will not disclose details to a public database, as they will want to keep their information out of the headlines. At the same time, high-performing and large funds may not want publicity that makes them stand out from their peer grouping.
2. **Backfill bias** – some funds joining a database may not present a complete record of their past time series of performances. Fund managers may, as a result, decide to start reporting only when their results reach a level that makes a positive impression on their investors.
3. **Survivorship bias** – unsuccessful funds tend to disappear and are dropped out of indices. Only successful funds remain and present their records over a longer time period. This history of results gives the wrong impression about fund performances into the future.

13. Structured Products

Learning Objective

5.12.1 Analyse the key features, relative merits and limitations of investing in structured products and investment notes compared with other forms of direct and indirect investment: structure (structured deposits and products); income and capital growth; investment risk and return; expenses; capital protection; American and European soft protection; counterparty risk; differences between retail and private placement products

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'Structured products' is a generic term used to loosely cover a diverse and a varied range of savings and investment products. In general, though, all structured products share features such as:

- offer income or growth, but not both
- have defined returns and defined risks
- have returns linked to a defined external measure (eg, MSCI ACWI, gold or oil prices), and
- have a defined term – this can vary widely, depending on the specific product and its underlying features, and can range from a few months to several years.

Another feature of some structured products is a principal guarantee function which offers protection of the principal if held to maturity. These capital-protected structured products are designed to return the original capital even if the underlying linked measure underperforms.

All of these products are designed to run up to maturity, at which point the issuer of the product will aim to return the initial investment/deposit amount, along with the underlying linked asset's gain.

These products can be separated into two main categories:

- **Structured investments** – these are generally pre-packaged investments that are based on derivatives, a single security, a basket of securities, options, indices (including dual indices), commodities, debt issuances and/or foreign currencies, and, to a lesser extent, swaps. They are primarily innovations designed to fulfil highly customised return/risk objectives.

  'Capital at risk' varieties of investment-based structured products offer high returns if the linked index measure outperforms; however, they can generate losses at maturity if the underlying linked index performs poorly. The structured nature of such products also utilises barriers or buffers to cushion some of the losses in the event of larger-than-expected falls in the linked index measure.

- **Structured deposits** – these are cash-based products but can only be offered by banks which are able to accept deposits. The underlying asset in structured deposits is a cash deposit and the returns may be linked to the performance of another asset (eg, the MSCI ACWI) between the date when the fund is set up and its end date. Structured deposits are designed to return at least the initial amount deposited at the end of the product's life.

While deposit-based products benefit from the protection of a deposit protection scheme (eg, the FSCS in the UK) in the event of counterparty defaults, investment-based products do not. This key aspect differentiates this form of structured product from investment-based products.

Structured products can be used as an alternative to a direct investment, as part of the asset allocation process to reduce risk exposure of a portfolio, or to ride the current market trend. The risks associated with many structured products (especially those products that present risks of loss of principal due to market movements) are similar to those risks involved with options. Structured product funds are also available in the market, thus enabling investors to access a range of strategies through one investment (rather than using separate structured products for each).

Even in the case of a principal-protected product, they are only insured by the issuer, and thus they have a counterparty risk attached to them. Some firms have attempted to create a new market for structured products that are no longer trading. These securities may not be trading, due to issuer bankruptcy or a lack of liquidity to insure them.

13.1 Types of Structured Products

Retail structured investment-based products fall into the following categories, each with its own risk/reward profile: principal-protected, buffer-zone and return-enhanced.

13.1.1 Principal-Protected Products

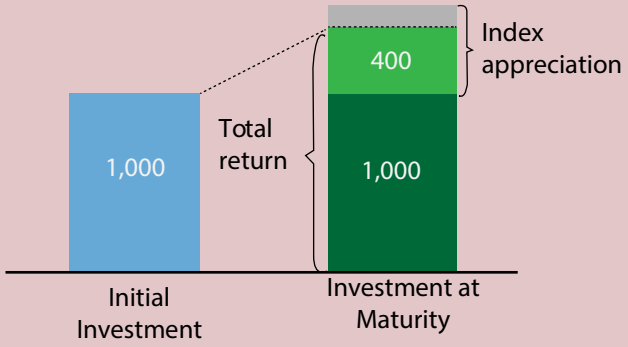
These products guarantee the return of the investor's principal, regardless of the performance of the underlying asset, and offer varying degrees of exposure to asset growth.

A principal-protected investment may be appropriate for investors who have long-term financial obligations but are unwilling to risk their principal. These investments generally offer a return at maturity linked to a broad-based equity index or a qualified basket of stocks. Investors typically give up a portion of the equity appreciation in exchange for principal protection. Maturities often range from five to seven years, and investors should intend to hold the investments to maturity.

Example – Principal-Protected Investments

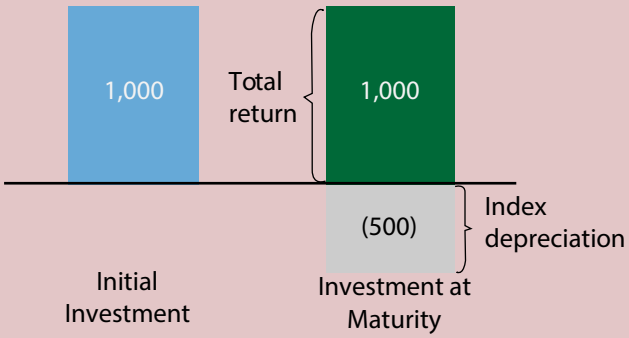
Investor A wants to preserve their principal but make money as equity markets rise. Investor A may consider the equity markets too risky for a direct investment, but is comfortable given the added protection of a principal-protected note. Investor A puts €1,000 in a seven-year principal-protected note linked to a broad-based equity index (the S&P 500) with an 80% participation in the index appreciation.

Scenario 1 – the index is up 50% at maturity:



At maturity, the investor will receive their €1,000 principal back, plus 80% of the index appreciation, equal to 40%.

Scenario 2 – the index is down 50% at maturity:



At maturity, because the index has declined, the investor will receive their €1,000 principal back.

13.1.2 Risk-Managed Products

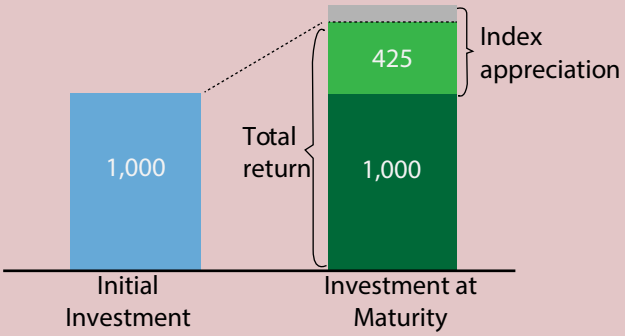
These products involve varying levels of protection (where investors are exposed to potential gains), but also carry some risk to their principal. They can be structured to provide greater upside potential than principal-protected products.

Investors in buffer-zone investments, for example, are offered the potential for greater upside compared with a principal-protected investment in exchange for risking their principal. Generally, buffer-zone investments can be structured to have a shorter maturity than a principal-protected investment (typically between two and four years).

Example – Buffer Zone Investments

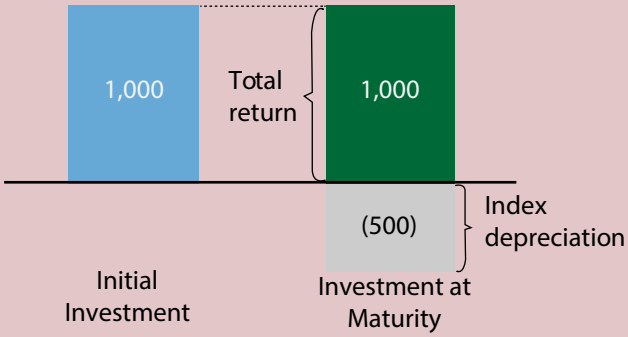
Investor B is willing to accept a 20% buffer zone, meaning they will begin to lose their principal if the index has declined more than 20% at maturity, in order to receive 85% participation in the index appreciation over three years. Investor B puts €1,000 in a three-year buffered equity note linked to a broad-based equity index with an 85% participation in the index appreciation.

Scenario 1 – the index is up 50% at maturity:



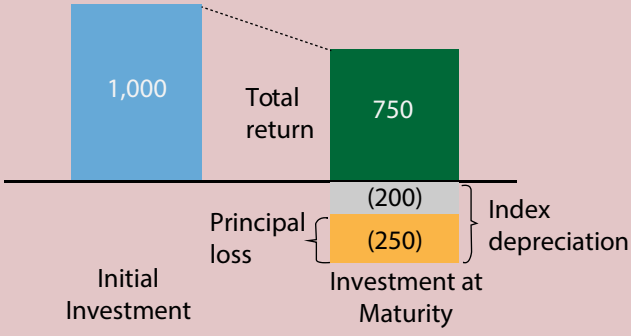
At maturity, the investor will receive their €1,000 principal back, plus 85% of the index appreciation, equal to 42.5%.

Scenario 2 – the index is 15% down at maturity:



At maturity, the investor will receive their €1,000 principal back because the index is within the buffer zone.

Scenario 3 – the index is 45% down at maturity:



At maturity, the index is 25% below the buffer zone. The investor will lose 1% of their principal for each 1% the index has declined below the buffer zone, or 25% of their initial investment.

13.1.3 Leveraged and Return-Enhanced Investments

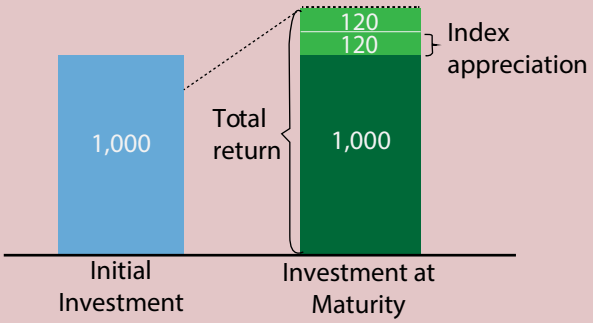
These products are typically used by investors who are seeking higher returns in a moderately bullish market, but with the understanding that they accept full downside exposure.

If an investor believes that market returns are likely to be flat to slightly up, over the near term, a return-enhanced investment may be an ideal investment vehicle as they offer leveraged upside in a moderately bullish market. In exchange for accepting full downside exposure in the underlying, a return-enhanced investment offers double or triple the equity returns up to a pre-specified maximum. Return-enhanced investments tend to have maturities of one to three years.

Example

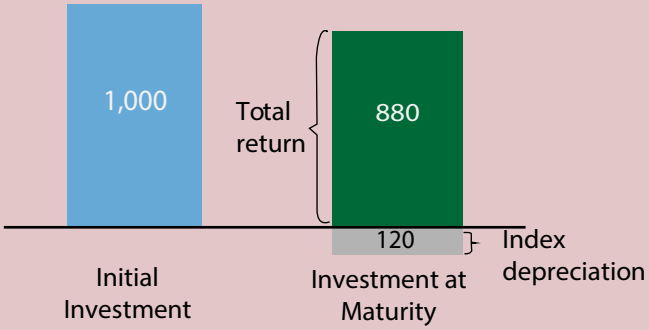
Investor C has a flat to moderately bullish market view and would like to achieve a higher return than would otherwise be possible in the current market. With a return-enhanced investment, Investor C will receive twice the appreciation in the underlying equity index as a return, subject to maximum return, or cap of 26%, at the end of two years. If the index has declined at maturity, a 1% loss in principal will occur for each 1% decline in the index. Investor C puts €1,000 in a two-year return enhanced note linked to a broad-based equity index.

Scenario 1 – the index is up 12% at maturity:



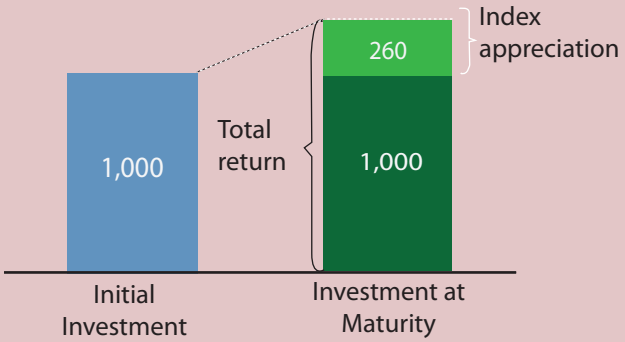
At maturity, the investor will receive their €1,000 principal back, plus double the 12% index return, equal to 24%.

Scenario 2 – the index is down 12% at maturity:



At maturity, the investor will lose 1% of their investment for each 1% decline in the index.

Scenario 3 – the index is up 30% at maturity:



At maturity, because the index is above the 13% upside cap, the investor will receive the maximum return of 26%.

13.1.4 Other Types of Structured Products

Income-Based Investments

Other types of income-based investment offer varying degrees of principal protection and are primarily focused on generating one or more coupon payments during the term of the investment.

Strategic Access Investments

At times, an investor may wish to have exposure to a fairly inaccessible index or to a complicated and expensive trading strategy.

Hybrid Investments

Other possible investments include equities, currencies, commodities and fixed income. These innovative investments enable investors to take investment views simultaneously across several asset classes.

Dual Index Products

With these structured products (also called digitals), the returns are linked to the performance of two indices – eg, the FTSE 100 and the Eurostoxx 50. The product will offer a return providing both indices are at, or above, a predefined level at a point in time.

Constant Proportion Portfolio Insurance (CPPI)

This is a trading strategy that allows an investor to maintain an exposure to the upside potential of a risky asset while providing a capital guarantee against downside risk. The outcome of the CPPI strategy is somewhat similar to that of buying a call option but does not use option contracts. For this reason, CPPI tends to compete with absolute return strategies.

Soft Protection

These structures return investors' capital in full at maturity, provided the underlying asset does not fall below a predetermined barrier. This barrier is usually observed either daily throughout the investment term (an American barrier) or on the maturity date only (a European barrier).

Given the American barrier could potentially be breached daily throughout the term, it is higher risk than the European version; therefore, the pay-off for a product with an American barrier will usually be higher than a product with a European barrier.

Structured Capital-At-Risk Products (SCARPs)

SCARPs aim to return the original investment at the end of the term, unless the index or asset price that the product is linked to has fallen below a predetermined level. Investors in SCARPs can, therefore, lose money (or even all of their investment) with some products.

13.2 Counterparty Risks and Other Considerations

The returns offered by structured products (even the principal-protected variety) are only as good as the credit quality of the issuer. Even though the cash flows and the principal in a structured product may come from a stable investment (eg, a bond), the products themselves are legally considered to be the issuer's liability. Often, the products are created and sold by large global financial institutions and investment banks whose own credit rating may be less than the underlying assets held. If the issuer goes bust, then the product's principal-protected guarantee may not apply and the capital will be at risk.

During the global financial crisis, several firms that had issued structured products (including Lehman Brothers) went into administration or bankruptcy and could not meet their obligations. Investors had to wait (along with bondholders) to recover their funds invested with the banks who offered those products. Regulatory authorities have recognised that counterparty risk is a significant issue in the post-Lehman Brothers collapse, and have called for providers to describe the risks in their marketing and sales literature fully.

Structured products can be complex and may have unique characteristics that often cannot be replicated or provided by other issuers. For the investor, this product differentiation creates price transparency issues. It is therefore harder to determine the intrinsic values of each competitor product in the market and to compare alternatives offered by each provider.

13.3 Differences Between Retail and Private Placement Products

Retail structured products are off-the-shelf financial securities that are linked to an index or a combination of indices. As their name suggests, they are then marketed and distributed to retail investors through intermediaries (eg, banks) or other retail-facing businesses, rather than directly by the product provider.

Structured products first became available to retail consumers in the early 1990s, originally as a way for them to access stock market returns without risking capital. Today, they allow retail investors to obtain exposure to various asset classes, market segments and investment strategies that were previously only available to professionals.

The retail-structured product market has become increasingly popular since the global financial crisis, driven by low returns from traditional investment forms and a persistent low-interest rate environment in the 15 years that followed the crisis, as well as increased levels of volatility in the underlying markets. Given this rapid growth, regulators worldwide have repeatedly expressed concerns about potential risks to stability of the global financial system over the years. For example, a lack of robustness in firms' product development and marketing processes, the potential for structured products to be missold to retail consumers, and a degree of product complexity such that retail consumers cannot understand the risks and costs involved. Regulators have, therefore, introduced rules and guidance which set out clear expectations on firms with the aim of enhancing consumer protection – for example, in the UK, firms are required by the FCA to provide consumers with clear and balanced information on each product and any risks.

In contrast, private placement structured products are bespoke products that are only available to qualified investors such as regulated financial intermediaries and insurance companies, public entities, and HNWIs. These products can hold a variety of investments across a range of asset classes, regions and geographies including a basket of securities, single stocks, indices, derivatives, commodities, debt issuances and/or foreign currencies.

14. Retirement Planning

Learning Objective

5.13.1 Analyse the main types, purpose, structure and operation, tax treatment and investment characteristics of pension arrangements: defined benefit; defined contribution; personal pensions; self-invested personal pensions (SIPPs); small self-administered schemes (SSASs)

5.13.2 Analyse the key features of pension arrangements: contributions – sources, level and limits; investment selection and performance; with-profit funds; how benefits are provided; annual allowance; fees

Planning for retirement is an important element of the investment advice process – even for the youngest clients. As people live longer and face the prospect of longer periods of a non-working old age (even with rising retirement ages), it is important that they consider the ways in which they may fund their needs as they get older. Pensions and associated products are the main retirement planning tools we will consider.

In the UK, as of 6 April 2006 (known as A-Day or 'pensions simplification'), a new set of pension rules were introduced which simplified the pension system. These rules have been refined still further, including under the following acts:

- **Pensions Act 2008** which requires every employer in the UK to put certain staff into a workplace pension scheme and contribute towards it (called automatic enrolment).
- **Pensions Act 2011** which equalised the state pension age (SPA) for all genders. The SPA is the earliest age at which an individual can start claiming their state pension (currently 66).

- **Pensions Act 2014** which introduced the single-tier state pension for those reaching the SPA from that date, among other things.
- **Pension Schemes Act 2021** which significantly changed the legal and regulatory landscape for pensions in a wide range of areas.

Most individual pensions do not start paying an income as soon as an individual retires. Instead, they allow the individual a choice on when and how they wish to start taking the income. This income can be taken from a pension from the age of 55, called the normal minimum pension age (NMPA). The NMPA is set to increase to age 57 by 2028 and thereafter in line with the SPA.

Typically, up to 25% of a pension's value can be taken as a tax-free lump sum. However, some individuals who built up pension benefits in an occupational pension scheme before 6 April 2006 may be entitled to a higher tax-free amount – this is known as scheme-specific tax-free cash. The remainder can be converted into an income via an insurance provider using an annuity (see section 14.4) or placed into an alternative retirement product (eg, flexi-access drawdown (FAD)). The annuity will pay a taxable income to the retiree for the remainder of the individual's life. Once the annuity is set up, the rate is fixed, offering a secure lifelong regular income to the pensioner.

Under the Pensions Act 2014, retirees are able to take the balance of their pension fund, after tax-free cash, as a further lump sum taxable at their marginal rate of income tax. In effect, this allows the withdrawal of the entire pension fund, with no requirement to purchase an annuity or to set up a drawdown arrangement. This is referred to as uncrystallised funds pension lump sum (UFPLS).

This is a complex area that advisers must stay up-to-date on in terms of the rules, or at least be in a position to refer clients to a specialist adviser in this area.

14.1 Occupational Pension Schemes

Occupational pensions are pensions provided by an employer to its employees, and the scheme assets are looked after by trustees, who should ensure that the employer pays into the scheme regularly. The pension that they provide is either linked to the employee's salary (also known as defined benefit) or to the performance of their pension investments (defined contribution).

- Defined benefit (DB) pension schemes pay a pension based on two factors. They are:
  - the length of time that the employee has been employed, and
  - the employee's salary. Some schemes use their salary on retirement as a reference point (a final salary scheme), while others use the average salary over their time with the company (a career average scheme).

Many DB schemes have been phased out or closed to new members in recent years by employers, and replaced with defined contribution (DC) schemes where the risk is borne by the employee. In contrast to DB schemes, DC schemes are not directly based on the employee's salary or years of employment (although this will affect how much is paid in). An individual pension pot is built up for each employee, through contributions made by the employer and the employee. The employee then uses this pot at retirement to convert the pension into an income, usually by buying an annuity; hence, these schemes are also called money purchase schemes.

The value of the employee's pension pot on retirement will therefore depend on:

- how much has been paid into the scheme over the employee's working life
- how well it has performed in investment terms
- what charges have been deducted, and
- what conditions are in the market for converting it to an income when the employee retires.

14.2 Personal Pensions

Personal pensions are offered by commercial financial services providers, such as life companies. All personal pensions are DC schemes. They may be set up by an individual client who is arranging their pension privately (a popular option for the self-employed) or those who move between jobs regularly. Some employers also offer access to them, and in this case, they are not classified as occupational schemes. Personal pensions, self-invested personal pensions (SIPPs), group personal pensions (GPPs) and retirement annuity contracts are all forms of personal pensions.

The pension that the individual will receive on retirement will depend on the same factors as per DC schemes: the level of contributions over the individual's working life, performance in investment terms, charges and market conditions.

14.2.1 Stakeholder Pensions

Stakeholder schemes are a form of personal pension meeting certain requirements such as low charges and accessible minimum contributions. They are designed to make pensions more affordable for those on lower incomes, but have also been popular with other sectors of the population on account of their apparent value for money. Like ordinary personal pensions, they are offered by commercial organisations, such as life companies.

14.2.2 Self-Invested Personal Pensions (SIPPs)

SIPPs are a form of do-it-yourself pension plan that permit an investor to put their active investments into a private pension pot. They enable an investor to choose between a variety of investments, unlike other pensions; and in addition, they provide the same tax advantages as other pension plans.

14.3 Small Self-Administered Schemes (SSASs)

A SSAS is a company scheme where the members are usually all company directors or key staff. A SSAS is set up by a trust deed and rules, and allows members/employers greater flexibility and control over the scheme's assets. Benefits can be built up on either a DB or DC basis.

Schemes with fewer than 12 members, and where all decisions are made unanimously or they have an independent trustee, are exempt from the trustees' knowledge and understanding requirements of the Pensions Act 2004 and the member-nominated trustee requirements. If every member of the scheme is a trustee, the scheme will also be exempt from the internal disputes resolution procedure requirements.

SSASs may borrow to invest and to provide a member's benefit that has become payable, but these loans are subject to certain conditions set by HMRC. These conditions include the following:

- The loan should not exceed 50% of the net market value of the scheme's assets.
- The loan should be secured against assets of an equal value by way of a first charge.
- The loan's terms should be no longer than five years.
- Interest of at least 1% above the Bank of England (BoE) base rate should be charged on the loan.

Shareholdings in the sponsoring employer should not exceed 5%. Shares can also be bought in more than one sponsoring employer, as long as the total holdings are less than 20% and shares in any one sponsoring employer are less than 5%.

The trustees of a SSAS can invest in a broad range of investments, including commercial property and land, stocks, shares, futures and options quoted on a recognised stock exchange, OEICs, unit trusts and investment trusts, hedge funds, insurance company funds, bank and building society deposits and gold bullion. There is no restriction (apart from the self-investment restrictions above) on the percentage of shares which can be held in one company.

If the scheme invests in taxable property (ie, residential property and tangible moveable property such as fine wine and cars), then tax charges called unauthorised payment charges and scheme sanction charges may apply. Capital gains can also apply on the sale of a taxable property.

14.4 Annuities

When someone retires, they can use all or part of their pension pot to buy an annuity. This is a financial product offered by insurance companies that provides a guaranteed income for life or for a fixed term, in exchange for a lump sum.

There are two main ways to purchase an annuity, depending on the source of funds:

Compulsory Purchase Annuities (CPAs)	Purchased Life Annuities (PLAs)
• **Source of funds** – bought using pension savings, after taking any tax-free lump sum. • **Tax treatment** – the entire income from the annuity is fully taxable as pension income. • **Regulation** – governed by pension legislation, including the Finance Act 2004. • **Typical use** – commonly used at retirement to convert a pension pot into a guaranteed lifetime income	• **Source of funds** – bought using non-pension money such as savings, inheritance, or proceeds from a property sale. • **Tax treatment** – only the interest portion of each payment is taxable; the capital portion is tax-free, as it is a return of the original investment. • **Regulation** – not subject to pension rules, offering greater flexibility in structure and use. • **Typical use** – available to anyone (not just retirees) seeking a tax-efficient income stream.

There are four main types of annuity that an adviser can recommend: lifetime, impaired life, enhanced and deferred.

14.4.1 Lifetime Annuities

A lifetime annuity is a contract under which the member (called the annuitant) hands over all or part of their pension fund. In exchange, the insurance company (ie, the provider) agrees to pay an income to the member for the remainder of their life. This annuity can either be fixed or it can be index-linked. The annuity can be set up so that it is payable for a minimum of five or ten years, even if the member dies before that period ends. In that case, the annuity would then revert to the member's spouse or civil partner.

A variation of this is an annuity with a guaranteed period (up to a maximum of ten years). This is the time period within which the annuity will continue to be paid, even if the member dies prematurely. After the guarantee period ends, if the member is still surviving, then the regular payment will continue as normal until their death. One reason for taking a guaranteed period annuity is to ensure that a surviving spouse or civil partner can benefit from the pension should the member die within the period.

A spouse/civil partner pension is a feature added on to a regular pension annuity where a surviving spouse or civil partner on the death of the member gets the benefit. These types of pensions are selected as 50%, 66% or 100% of the original pension. The regular income provided will be based on the relative ages of the two annuitants.

14.4.2 Impaired Life Annuities

Impaired life annuities pay an annuity in the same way as a lifetime annuity. However, they pay a higher amount to those suffering certain medical conditions on the basis that they have a reduced life expectancy.

14.4.3 Enhanced Annuities

Enhanced annuities are normally available to regular smokers, people in poor health or those who have spent a good proportion of their working lives in hazardous occupation. Note that if a member is accepted under this payment scheme, income will be higher than for a conventional annuity because the provider only expects to pay out for a shorter period of time.

14.4.4 Deferred Annuities

Deferred annuities pay a regular income or a lump sum, at a future date, thus allowing the member to delay their payments until they decide when to receive them. Deferred annuities give a member's money time to grow, and therefore maximise earnings. However, the member will have to wait until the deferred phase is complete, so this type of annuity is not ideal for members who want their annuity payments to begin straightaway.

14.5 Pension Contributions and Tax Relief

Since 'A-Day', which we touched upon in section 14 above, investors can save up to certain limits into a pension scheme. The rules for claiming tax relief on their pension contributions are more flexible, although tax charges apply if contributions exceed certain allowances.

14.5.1 Annual Allowance

Contributions to a personal pension scheme from after-tax income are usually treated as being paid net of basic rate income tax of 20%. Since 20% tax relief is automatically given on contributions, higher and additional rate taxpayers can claim an extra 20% or 25% of tax relief respectively through their Self-Assessment tax return (for England, Wales and Northern Ireland; the rates differ in Scotland).

Whether these contributions are made by the individual and/or their employer, they are subject to an annual allowance. This is the maximum amount of tax relievable benefit that can be paid into or accrued in a UK-registered pension scheme during each pension input period (PIP) without incurring a tax charge; PIPs align with the UK tax year, running from 6 April to 5 April the following year .

For 2025–26, the annual allowance is £60,000 gross. Investors can also carry forward unused annual allowances from the previous three tax years. This is capped at £60,000 for 2024–25 and 2023–24, and £40,000 for 2022–23. Thus, investors may be able to contribute up to £200,000 gross in 2025–26 if they have sufficient earnings, have been a member of a registered pension scheme for the previous three tax years and have not made any prior contributions. However, the rules around carry-forward are complex.

There is no limit on the level of contributions that an individual can make to their pension schemes, but tax relief is restricted to the higher of:

- £3,600 (ie, £2,880 gross with 20% tax relief from the UK government), or
- 100% of relevant UK earnings (broadly, any earnings that are subject to UK income tax).

This means that individuals with no earnings or who earn less than £3,600 gross can still contribute to a personal or stakeholder pension scheme (ie, not through an employer's scheme) and qualify for tax relief added on those contributions.

Employer contributions are deductible against corporation tax, provided they are wholly and exclusively for the purposes of the employer's trade; if an employer's contribution is over £500,000 more than the previous year, then tax relief may be spread.

Notwithstanding these limits, contributions to a pension fund can be tax effective, particularly for higher and additional rate taxpayers. Contributions to a spouse's or civil partner's scheme can also be helpful if an individual is close to the limits on their own contributions.

14.5.2 The Tapered Annual Allowance

The annual allowance is tapered (ie, reduced) for high earners. A high earner is someone who has an adjusted income of over £260,000 and threshold income of over £200,000:

- Adjusted income is an individual's total taxable income before any personal allowances and less certain tax reliefs. Threshold income is similar to adjusted income, except that adjusted income includes all pension contributions (including any employer contributions) while threshold income does not.
- For every £2 of adjusted income above £260,000, the annual allowance will be reduced by £1. However, it will not be reduced if the threshold income is £200,000 or less, regardless of the level of their adjusted income.

The minimum tapered annual allowance is £10,000 for 2025–26. This means that if a person contributes more than their tapered annual allowance, they will be subject to the annual allowance charge. The rate of the annual allowance charge is not fixed but will depend on how much taxable income the individual has and the amount of contribution in excess of their annual allowance.

Similar to the standard annual allowance, the tapered annual allowance can also be carried forward – by up to three years, as long as the individual was a member of a pension scheme during those three years. However, when carrying forward any unused tapered allowance, the available unused allowance will be the balance of the tapered amount. For example, if an individual has a tapered annual allowance of £10,000 but only utilises £3,000 in the tax year, then the available unused allowance that can be carried forward is the balance of the tapered amount, which is £7,000.

14.5.3 Money Purchase Annual Allowance (MPAA)

An individual's annual allowance will be replaced by the money purchase annual allowance (MPAA) should they access their pension funds in any of the following ways:

- via uncrystallised funds pension lump sum (UFPLS)
- receiving income above the maximum limit for capped drawdown members
- accessing a flexible annuity, or
- once income has been taken from a flexi-access drawdown plan.

The MPAA for 2024–25 is £10,000 gross. Furthermore, the carry-forward of unused annual allowances will not be available where a MPAA applies.

14.5.4 Abolition of Lifetime Allowance and Introduction of New Limits

In previous years, a lifetime allowance (LTA) was in place, which set a limit on the total value of pension savings that could be drawn without incurring an additional tax charge. The LTA charge only applied at the point when pension benefits were crystallised (such as when taking a lump sum, drawing an income or reaching age 75), and only on the value exceeding the available LTA. Various protections, such as fixed protection (FP) and individual protection (IP), were available to allow individuals to lock in a higher personal LTA based on their circumstances.

The LTA was abolished on 6 April 2024, and replaced with three new allowances:

- **Lump sum allowance (LSA)** – the LSA is a limit on certain lump sums that can be paid during the member's lifetime from their pension savings, tax-free (up to £268,275).
- **Lump sum and death benefit allowance (LSDBA)** – this limits the value of pension savings that an individual can leave to their beneficiaries tax-free (up to £1,073,100).
- **Overseas transfer allowance (OTA)** – the OTA limits the tax-free value of transfers to qualified recognised overseas pension schemes (QROPS). It is also £1,073,100.

These allowances may be higher if the individual had lifetime allowance protection, as described above. Further, the allowances are reduced if benefits were taken before 5 April 2024.

14.6 Fees

All pension plans come with charges, but providers do not have a set or fixed charging structure; rather, different providers take different approaches to fees, so the amount and type of charges vary widely. This can make it difficult for scheme holders to understand what they are paying.

It is, therefore, important for scheme holders to understand the charges that are applied, and the long-term effects these will have on the size of their overall pension pot (and, in turn, the level of retirement benefits).

Additionally, some providers reportedly bury details of any extra charges in their small print or footnotes, so the headline charges may not represent the total amount that is actually being charged. People are, therefore, advised to read the fine print carefully before signing any contract.

The types of charges that providers levy may include the following:

- **Annual management charge (AMC)** – this covers the provider's cost of administering the pension and investing contributions. It is charged as a fixed percentage of the value of the pension pot, typically up to 1% (an AMC of 1-2% is considered to be expensive).
- **Administration fee** – this is sometimes referred to as the service fee or policy fee. While some providers include the administration fee as part of the AMC, others charge it separately.
- **Contribution charge** – whenever a scheme holder makes a contribution to their pension, it may incur a contribution charge. This is charged as a percentage of the amount contributed. While no longer common, some providers still charge them.
- **Inactivity fee** – some pension schemes include a clause whereby scheme holders are penalised if they stop making contributions.
- **Fund charge** – this is the cost of administering any funds in which the pension is invested. It is charged on top of the AMC.
- **Platform charge** – some scheme holders may use an online service, called a platform, to manage their pension, in which case those providers charge a fee for providing this service. The charge can vary considerably between platforms.
- **Dealing charge** – for pensions that are invested in stocks and shares, dealing charges (also called trading charges or transactions charges) are incurred upon trading. Scheme holders also need to be aware of the difference between buying (bid) price and selling (offer) prices. This difference represents broker costs and, typically, replaces broker commissions and fees when trading. Slippage (ie, the price difference between what a trader places and what the trade is actually executed at) can also occur. This difference represents the profit to the broker.
- **Exit fee/transfer costs** – when the scheme holder withdraws or transfers their savings, some pension providers charge an exit fee (currently capped at 1%).

Scheme holders can find details of their charges on a key features document (KFD), on an annual pension statement (if provided), or on the provider's website. Alternatively, they can contact the provider directly for an overview of their pension charges.

14.7 Investment Selection and Performance

When deciding what investments to make within a pension, there are several important factors that will need to be considered.

14.7.1 Accumulation Phase

One important consideration is the time horizon for investment – in other words, the time period in which an investor is expected to hold an investment for a specific goal. The period during which an individual is building up their savings and the value of their investment portfolio, usually with the intention of providing a nest egg for retirement, is called the accumulation phase. Generally, the accumulation phase can be 35–40 years, depending on the age of the individual and when they plan to retire (or draw on the pension, if later). For example, someone who is aged 25 and is planning to retire at age 65 will have an accumulation phase of 40 years.

Generally, the longer the accumulation phase, the more time there is to ride out market fluctuations. Investors in the accumulation phase also typically have less of a need for liquidity. All in all, they can afford to take on more risk. They may, therefore, favour high-risk, high-reward investments that will help to build-up their assets over the accumulation phase, thus offering the potential to build-up a larger pension pot for retirement. Over longer time periods, equities have historically produced positive returns, so a heavier exposure to equities is more likely to be suitable for those with a longer accumulation phase; whereas returns from cash and bonds are lower in the long term, so they will likely represent a smaller part of the pension portfolio at that stage.

14.7.2 Nearing Retirement and Lifestyling

As the investor nears retirement, they will generally opt to protect their accumulated investment against any downturn in the market. This, along with an increased need for liquidity, means that they are likely to become more conservative in their approach. Over shorter time periods, equities are exposed to higher market risks, whereas bonds have less risk – thus, in the years leading up to retirement, a shift in the portfolio from equities to bonds reduces the risk for the investor.

The standard rule of thumb is that the allocation to non-bonds (eg, equities) is equivalent to 100 less the individual's age – for example, a 70-year-old should hold 30% of their portfolio in equities and 70% in bonds. However, with life expectancy increasing (see chapter 2, section 1.2), changing that rule to 110 (or even 120) less the age may be more appropriate.

Many pension schemes offer a lifestyling option. This is an investment strategy whereby the member's fund is automatically moved away from riskier investments (such as equities) into more secure investments (such as investment-grade government bonds and cash) as retirement approaches.

That said, some investors may be naturally more risk-averse, whereas others may still opt to take on more risk even with a shorter time horizon, which will impact on the overall asset allocation. Attitude to risk and capacity for loss, among other considerations, are covered in chapter 6, section 1.

14.7.3 Decumulation Phase

The period during which an individual has retired and is spending the money is called the decumulation (or distribution) phase. This phase is characterised by the conversion of savings and investments into a steady stream of income to cover living expenses, leisure activities and other financial obligations during retirement – for example, via the purchase of an annuity.

Market conditions play a crucial role in determining the success of the decumulation strategy. Economic fluctuations, inflation and investment performance (to name a few) can impact the overall value of the retirement portfolio. The individual's lifestyle choices (eg, travel or discretionary spending) can also influence the rate at which the assets are distributed. Further, several factors such as the individual's health will impact life expectancy, and therefore the duration of the decumulation phase.

As a result, retirees often need to strike a balance between generating income and preserving the principal, to ensure a sustainable and lasting financial plan. Financial planning during the decumulation phase often involves careful consideration of withdrawal rates, tax implications and investment strategies.

14.8 With-Profit Funds

A with-profit fund is a type of collective investment scheme, but whereas a traditional CIS is subject to market fluctuations, the value of a with-profit fund moves in a smoother manner. This process, known as 'smoothing', is designed to lessen the impact of market volatility on the fund value. Additionally, they guarantee that the value will not reduce; that is, provided that investors cash in the fund on a set date, which is agreed at the start of the investment.

The structure and management of with-profit funds can differ significantly between providers, and even among various funds offered by the same provider. Broadly speaking, though, smoothing is achieved by the fund holding back some of the returns generated in positive periods, and using them to support the fund during negative periods when the fund's value has dropped. As a result, the fund's value fluctuates less dramatically over time; it follows that the value given of the investment does not necessarily reflect the true value of an investor's share of the assets in the fund.

In order to analyse a with-profit fund, investors can examine the following aspects and key features:

- **Investment strategy** – the fund's investment approach, including the types of assets in which it invests; and the diversification strategy to assess risk management.
- **Performance history** – the historical performance of the fund over different time periods, and compared with relevant benchmark and industry standards.
- **Smoothing mechanism** – how the fund implements smoothing, and the specific mechanisms used during positive and negative periods.
- **Guarantees and bonuses** – identifying whether the fund provides any guaranteed components (eg, minimum return or capital protection).
- **Charges and fees** – including any entry and exit charges, annual management charges (AMCs) and other expenses (see section 5.1 of this chapter).
- **Surrender values and exit conditions** – any penalties associated with early withdrawals; and the terms and conditions for exiting the fund.

14.9 Pension and Retirement Income Arrangements in Other Countries

Worldwide, pensions and retirement income arrangements play a significant role in ensuring that older people have sufficient income, so they may enjoy a sufficient standard of living in retirement. These arrangements are diverse from country to country and are generally quite complex, often with multiple tiers of provision and a whole host of rules and regulations that govern them.

In general, many flat-rate (single-tier) pensions have a statutory retirement age and residence and/or means testing criteria for benefit eligibility. Further, contributions are generally not required since the government covers the full cost. Conversely, for earnings-related schemes, the government only covers a portion of the costs, so individuals are required to make contributions for a minimum period in order to receive an adequate level of pension.

However, due to ageing populations and changes in the labour market over the past few decades, pensions systems worldwide are facing several challenges, leading to concerns about their ongoing viability. Other concerns include the adequacy of pension benefits and the coverage of pensions arrangements. Consequently, many countries have been reforming their pensions systems (eg, increasing the level of contributions to generate the same level of benefits, reducing incentives for early retirement and placing more emphasis on private arrangements, away from public). Some countries are encouraging people to work longer, some are allowing workers to phase down their working hours as their retirement approaches, and others are discouraging older people from working while drawing a pension.

Key Chapter Points

- A majority of collective investment funds (or funds for short, among other names) are open-ended. In the UK, common types of open-ended fund are unit trusts, OEICs and ETFs.
- Closed-ended funds (eg, investment trusts) have a fixed number of shares in issue at any time, and they have much wider borrowing powers.
- The value of the units/shares in an open-ended fund are driven by the value of the underlying assets, whereas the value of a closed-ended fund fluctuates according to supply and demand.
- Thus, investment trusts can trade at either a premium (above NAV) or a discount (below NAV).
- For open-ended funds, equalisation payments are deemed to be a return of capital, so are not liable to income tax.
- Capital gains made within open-ended funds are exempt from tax.
- Closed-ended funds do not pay CGT on internal gains, providing they comply with the relevant rules.
- REITs are a special type of investment trust that invest in income-generating real estate assets. They pay no corporation taxes, nor are they subject to CGT on gains made on the disposal of property. In exchange for this favourable tax treatment, they must distribute at least 90% of their profits each year to shareholders as dividends.
- For tax purposes, offshore reporting funds are treated the same as UK-based funds. For offshore non-reporting funds, all gains are usually subject to income tax (rather than CGT).
- The dilution levy is a charge which may be imposed by the manager to cover the dealing costs.
- EISs, SEISs and VCTs invest in the shares of smaller and/or unquoted companies, thus they are high risk with the potential for high reward. To encourage investment, these schemes offer certain tax reliefs depending on the scheme and the investor's personal circumstances.
- 'Hedge fund' is a general term for a type of fund that can engage in a wide range of investment strategies, many of them outside the strategies permitted for authorised schemes.
- Common aspects of hedge funds include lighter regulation, investment flexibility, low correlation to world securities markets, and high minimum investment (although investors can gain access through funds of hedge funds (FOHFs) and investment trusts of hedge funds).
- Absolute return funds (ARFs) aim to achieve a positive return in a specified time frame, irrespective of market conditions. Unlike hedge funds, ARFs do not have to be domiciled offshore and may be fully UK-regulated.
- 'Structured product' is a term covering a diverse range of savings and investment products. Generally, structured products offer income or growth (not both), have defined returns and defined risks, and have a defined term. Some also offer principal protection if held to maturity.
- A pension is a way for individuals to save money for later in their life. Investors can save up to certain limits in a pension scheme, and can claim tax relief on those contributions.
- Occupational pensions are provided by an employer to its employees, and they can either be DB or DC schemes. Personal pensions are set up by individuals, all of which are DC schemes.
- Most individual pensions do not start paying an income as soon as an individual retires, but allow the individual to choose when and how they wish to start taking the income. Income from a pension can be taken from the age of 55, called the normal minimum pension age (NMPA).

End of Chapter Questions

Think of an answer for each question and refer to the appropriate workbook section for confirmation.

1. **What are collective investment schemes (CISs)?**
   Answer reference: Section 1.1

2. **What is the function of the authorised corporate director (ACD)?**
   Answer reference: Section 2.2

3. **What is one benefit and one risk of gearing?**
   Answer reference: Section 3.1.2

4. **What type of split capital investment trust share provides a predetermined return to investors when the trust is wound up?**
   Answer reference: Section 3.1.4

5. **What is the difference in the way in which offshore reporting and offshore non-reporting funds are taxed on the investor?**
   Answer reference: Sections 4.1.1 and 4.1.2

6. **Explain what is meant by the dilution levy.**
   Answer reference: Section 5.2.1

7. **What is the current annual allowance of an individual savings account (ISA)?**
   Answer reference: Section 6.1

8. **How much can a policyholder withdraw each year from an investment bond without triggering a liability to tax?**
   Answer reference: Section 7.2

9. **How do capital redemption bonds differ from other investment bond policies?**
   Answer reference: Section 7.3

10. **What income tax reliefs are available to investors in enterprise investment schemes (EISs)?**
    Answer reference: Section 9.1.1

Chapter Six

Portfolio Construction and Planning

1. **The Portfolio** 465
2. **Asset Allocation** 466
3. **Investment Selection** 475

This syllabus area will provide approximately 5 of the 80 examination questions



1. The Portfolio

The process of portfolio management centres around the client's needs and objectives. It starts with establishing a formal client relationship, followed by assessing the client's goals for wealth creation and their risk profile. This helps the portfolio manager to develop a tailored investment strategy.

The risk profile comprises two elements: risk tolerance (ATR) and capacity for loss (CFL), both of which are often assessed through questionnaires and software. ATR reflects the client's subjective feelings about risk, while CFL is an objective measure of their ability to withstand potential financial losses.

The client's time horizon is another key factor in constructing a portfolio. A client seeking income may have an open-ended time horizon, while someone aiming for capital growth may need access to their funds sooner. Liquidity and volatility of assets are other considerations. Combining these factors with the client's risk profile helps in making informed investment decisions tailored to the client's unique situation.

A key document in the portfolio management process is the investment policy statement (IPS). This outlines the client's return objectives, risk tolerance, constraints, income and capital requirements, tax considerations, and other specific circumstances. This document, combined with capital market expectations, guides the construction of the portfolio to achieve the client's goals.

The portfolio manager must then take a series of steps to create and maintain a portfolio that aligns with the client's goals. The central decision in this process is asset allocation, where the portfolio manager determines the appropriate mix of assets to meet the client's objectives.

These allocations can be:

- strategic (long-term) or tactical (short-term)
- active (aiming to outperform a benchmark index) or passive (seeking to replicate it).

Additionally, ethical and sustainable investment considerations (which focus on issues such as environmental impact and worker conditions) may influence investment decisions.

Portfolios are traditionally constructed with three core components: cash (for liquidity), fixed-income securities (for income generation) and equities (for long-term growth). In more recent years, alternative assets such as property, infrastructure, commodities and private equity have become increasingly popular. The client's specific requirements for capital growth or income dictate the mix of assets used and the types of investments selected. Tax considerations and investment wrappers also play a significant role in determining the most suitable approach.

2. Asset Allocation

Learning Objective

6.1.1 Understand the purpose and principles of asset allocation: relationship with investment theory; trade-off between risk and return; stochastic modelling; active and passive management; strategic asset allocation (SAA); tactical asset allocation (TAA)

6.1.2 Understand how investment theory is applied to the process of portfolio construction

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Asset allocation divides an investment portfolio among different asset classes, based on an investor's financial requirements. The right mix of asset classes in a portfolio provides an investor with the highest probability of meeting their need, while considering their individual requirements and constraints. Each asset class selected has a long-term expected return relative to inflation, known as the real return.

Excluding cash (which is often held for liquidity purposes), equities and bonds are the two classic asset classes used in portfolio construction. Allocation decisions will aim to set the investment amounts in each asset class. For example, do we allocate 25% to bonds and 75% to equities, or settle on a different mix between the two? As we touched upon in section 1 above, investment can include a number of asset classes in practice, but historically the initial decision was based on division between equities and bonds. The rationale behind this decision is based on two factors:

1. The allocation is based on the expected return that an investor requires to meet their financial objective.
2. It is based on the investor's tolerance of, and capacity for, risk. A successful allocation is one that achieves an investor's financial goals without so much volatility that it causes the investor to make behavioural mistakes.

Asset allocation analysis should include a correlation study between investment types. Correlation is covered in chapter 3, section 2.4.3.

As we saw in section 3.2 of chapter 3, modern portfolio theory (MPT) is a theory of investment which tries to maximise return and minimise risk by carefully choosing different assets. While its origins date back to the 1950s, the theory still holds true today and it is widely used in practice in the financial sector. In more recent years, the basic assumptions of MPT have been widely challenged by fields such as behavioural finance (see chapter 3, section 3.5).

2.1 Risk and Return

MPT assumes that investors are risk-averse, which means that, when given two assets that offer the same expected return, investors will prefer the less risky one. Thus, an investor will take on increased risk only if compensated by higher expected returns. However, they will not invest in a portfolio if a second portfolio exists with a more favourable risk/return profile (ie, if an alternative portfolio with better expected returns exists for the same level of risk). The exact amount of risk that an investor will be willing to take will be based on their individual risk-aversion characteristics.

2.2 Deterministic and Stochastic Modelling

There are two approaches to portfolio management:

1. **Deterministic modelling** involves taking a single input (eg, the average growth rate) and assuming this will remain constant over a period – in other words, there is no randomness.
2. **Stochastic modelling**, in contrast, uses many random variables (based on fluctuations observed in historical data) to model thousands of possible investment return outcomes for almost all asset allocation combinations. This method allows actual or theoretical portfolios to be analysed to see their risk/return profiles and determine the likely range of returns which should be expected. These portfolios can then be matched against investors' own risk/return expectations, ensuring portfolios are tailor-made to individual client needs.

Example – The Deterministic Model

Imagine you have to work out how many times you expect to throw heads if you flip a coin a 1,000 times. The chance of throwing heads is even (ie, 50/50). Therefore, the deterministic model of that activity is 1,000 x 50% = 500 heads.

Example – The Stochastic Model

1,000 simulated coin tosses are performed, each of which has a 50/50 chance, and the number of heads is then counted and noted. You might get 487 or 505, or something else close to 500. The more simulations you run, the closer the stochastic result will get to 500, but the number simulated is also a factor that needs to be modelled and brought into account. Where the potential values are 'known' and no other variables are involved, then the outcomes (deterministic or stochastic) are virtually identical, but life and investments are not certain.

2.2.1 Why Use Stochastic Modelling?

Stochastic modelling comes into its own if the outcomes are what are known as path-dependent.

Example

An investor is building a portfolio, but also taking constant withdrawals, so the likelihood of them being able to sustain their income levels is not just affected by the impact of stock market movements, but also depends on when those falls happen. There may be a 5% fall in one year, but there is a dramatically different impact on the sustainability of their withdrawals if that 5% fall happens in year one rather than year ten.

In this scenario, the stochastic model runs thousands of trials to chart the frequency of outcomes and thus check the robustness of this drawdown strategy. Potential outcomes are derived from a large number of simulations (stochastic projections), which reflect the random variation in the input(s).

Achieving 20% a year consistently for 15 years is a goal that we would all aspire to reach. However, an investor would have to sell and miss the worst days in that time to achieve this and sometimes these setbacks can be extreme. To demonstrate how extreme stock markets can be, in the past 15 years, the MSCI ACWI experienced its worst-ever one-day falls during the onset of the COVID-19 pandemic with declines of about 10% on multiple occasions.

However, if an investor had simply left their money invested in an MSCI ACWI tracker from 1987 (the start of the available data) until January 2025 and not concerned themselves with buying or selling, they would have achieved an annualised return of 8.43% (before fees), even after accounting for those declines[1]. By trying to get it right but actually getting the timing wrong, investors can miss some of the best days, thus rapidly reducing their overall returns – bear in mind that most of these best days are usually straight after a fall (ie, immediately after the worst days).

Professionals say that trying to guess market timing never pays and these facts go some way to proving that. As the saying goes: *'time in the market, not timing the market'*.

We should therefore spend most of our time establishing risk rating, based on:

- time horizon for investment
- income or growth required
- attitude to risk, and
- amount invested.

These factors will determine a client's risk rating which, in turn, determines the asset allocation. Having established the asset allocation, broadly in line with attitude to risk, it is still important to find the best opportunities to benefit from better-performing fund managers in each of the asset classes.

1 MSCI, January 2025. MSCI ACWI Index (USD): Index Factsheet. Retrieved from https://www.msci.com/documents/10199/8d97d244-4685-4200-a24c-3e2942e3adeb (Accessed: March 2025)

However, stochastic modelling has its limitations. For example, it can be computationally complex to perform, involving an immensely large number of events, which in turn makes it difficult to communicate to, and be understood by, clients. Further, the assumptions can be far too simple and unrealistic for a real-world scenario. Finally, market returns are difficult to predict and, therefore, simulate. As a result, stochastic modelling should not be considered to be a substitute for ongoing planning and advice.

2.3 Active and Passive Management

In generating a return for their clients that is consistent with their risk profile and within the required time frame, portfolio managers can apply two main strategies when building a portfolio: active and passive. These strategies are covered in more detail in chapter 3, section 3.8. Further, recall from chapter 3, section 3.9 that active and passive strategies are not mutually exclusive; rather, portfolio managers can incorporate a combination of different styles.

A topic of some debate among investors is that relatively few active managers consistently outperform their benchmark indices, despite the high charges they levy; and the contention that those that do outperform are just lucky. Therefore, advocates of the EMH (which is covered in chapter 3, section 3.1), believe that lower-cost passive funds provide a better solution. Conversely, supporters of active investing maintain that active investors can produce consistent outperformance through careful analysis and expertise.

Arguments about the merits and shortcomings of active and passive investing began several decades ago. The debate really took hold in 2000, when Jack Bogle wrote the book *Common Sense on Mutual Funds*[2]. In his book, Bogle argued the investment case for low-cost index funds on the basis that markets are unbeatable in the long term. The subject remains one of the most divisive issues in the world of investing today.

Debates over which investment strategy is superior often centre on the US stock market (which is perhaps unsurprising given that it is the world's largest and home to many of the most widely held companies). Historical data consistently shows that most large-cap equity fund managers have underperformed the S&P 500 each year for several years.

It must be remembered that not all markets are the same each has a different mix of companies, industries, market capitalisations, among other factors,

Further, individual markets can exhibit different characteristics over time, with active strategies often outperforming passive ones during market corrections. All of this suggests that investors should evaluate each strategy based on the specific market conditions rather than applying a 'one-size-fits-all' approach.

In reality, there is no clear right or wrong answer in the active/passive debate. For example, not all passives are cheap, and not all actives are expensive. Regarding the latter, the rise of passive strategies has put active managers under increasing pressure to reduce their fees over the years to remain competitive. There are also many conflicting pieces of research debating the ongoing usage of both strategies.

2 Bogle, J.C., 2000. *Common sense on mutual funds: New imperatives for the intelligent investor*. John Wiley & Sons

2.4 Strategic Asset Allocation (SAA)

In SAA, the decisions on the portfolio mix are taken from a long-term perspective. Portfolio managers consider long-term client objectives, as well as capital market expectations, to come to this decision. This composition is called a policy portfolio and may be periodically rebalanced to adjust the portfolio to specific weights. The interpretation of 'long-term' is vague as it varies with each investor; however, five years is a reasonable minimum reference point.

The SAA is created by considering the long-term risk and reward trade-offs associated with a set of assets. For example, if equities have historically returned 10% per year and bonds 5% per year, a mix of 50% stocks and 50% bonds will be expected to return 7.5% per year. Remember, though, that equity prices are more volatile than bond prices, which implies a greater degree of risk (and thus potential losses). Therefore, as a client becomes more risk-averse, their demand for equities should fall.

2.5 Tactical Asset Allocation (TAA)

Over the long run, an SAA strategy may seem relatively rigid. Therefore, it may be necessary to occasionally engage in short-term, tactical deviations from the mix, in order to capitalise on unusual or exceptional investment opportunities. This flexibility adds a component of market timing to the portfolio, allowing participation in economic conditions that are more favourable for one asset class than for others.

TAA can be described as a moderately active strategy, since the overall strategic asset mix is returned to when desired short-term profits are achieved. This strategy demands some discipline, as investors must first be able to recognise when short-term opportunities have run their course, and then rebalance the portfolio to the long-term asset position.

However, the industry is divided over whether TAA adds any value. Some analysts argue that markets are difficult to time over short periods and that the trading fees and charges involved in making short-term changes to a portfolio may erode any profits. Others argue that TAA can complement a portfolio's long-term strategic view.

2.6 Investment Theories and Portfolio Construction

Portfolio managers are therefore presented with choices and allocations about the different types of assets to be included in a portfolio, both at the time of construction and at subsequent modification stages.

In section 3 of chapter 3, we discussed three cornerstones of modern finance:

- **Efficient market hypothesis (EMH)** – which posts that all publicly available and relevant information about a particular security is reflected in its price.
- **Modern portfolio theory (MPT)** – the main objective of which is to have an efficient portfolio (ie, one that yields the highest return for a specific level of risk).
- **Capital asset pricing model (CAPM)** – which is used to calculate a security's required rate of return given the systematic risk it provides.

Portfolio theory has a significant impact on portfolio construction. It provides a framework and a set of principles for constructing investment portfolios that aim to achieve an optimal balance between risk and return.

Firstly, portfolio theory emphasises the importance of diversification as a means to reduce risk. By investing in a mix of assets that are not perfectly correlated with each other, investors can potentially lower the overall risk (as measured by volatility) of their portfolio.

Portfolio theory also recognises the relationship between risk and return. This suggests that investors should seek an optimal balance between these factors based on their risk tolerance and investment objectives. As we have seen, portfolios can be constructed with varying levels of risk and return potential, depending on an investor's preferences. Portfolio theory provides mathematical models, such as the efficient frontier, which helps to identify the optimal mix of assets that, in turn, maximises (or minimises) expected returns for a given level of risk.

Indeed, the concept of the efficient frontier plays a crucial role in portfolio construction. By identifying the optimal portfolios on the efficient frontier, investors can construct portfolios that provide the best risk and return characteristics based on their individual preferences.

The significance of asset allocation in portfolio construction is highlighted by portfolio theory. The theory suggests that asset allocation has a significant impact on a portfolio's performance. In this regard, quantitative analysis techniques can be used to assess the risk and return characteristics of different asset classes and, within this, individual investments in order to construct portfolios that align with the client's needs and requirements. This involves statistical measures such as standard deviation, covariance and correlation to quantify risk and diversification benefits.

In summary, portfolio theory has revolutionised portfolio construction by providing a systematic and quantitative approach to asset allocation and risk management. It provides investors and portfolio managers with the tools that they need to construct well-diversified portfolios, that aim to achieve an optimal balance between risk and return, based on the investor's unique circumstances.

2.7 Basic Methods of Diversification

Learning Objective

6.1.3 Understand the basic ways to diversify a portfolio: asset class; geographical area; sector; currency; company size; management style; maturity and duration

As we saw in section 2.2.4 of chapter 3, spreading investments across all available asset classes (eg, cash, fixed-interest securities, equities and property) is the starting point for most portfolio managers.

Further diversification can be achieved by spreading the exposure in a particular asset class. This can be achieved in a number of ways, including exposure to different:

- **geographies** eg, developed and emerging markets and regions eg, North America, Europe, Asia
- **sectors** eg, natural resources, healthcare, technology and infrastructure
- **issuers** eg, governments and companies
- **currencies** eg, sterling, euro, US dollar and yen
- **company sizes** eg, large, mid and small cap
- **investment management styles (for equities)** eg, growth, value and blend
- **credit qualities** (for bonds) – investment grade and high yield, and
- **maturities and durations (for bonds)** – eg, short-, intermediate- and long-dated.

All in all, this helps to reduce the risk of a downturn in any particular area.

2.8 Combinations of Asset Classes

Learning Objective

6.1.4 Analyse combinations of asset classes based on: historical returns; index and benchmark comparisons; correlation of performances between asset classes; advantages and limitations of relying on historical data

2.8.1 Diversification and Correlation

As described in chapter 3, section 2.4.3, correlation is a pair-wise measure of how returns from two different assets move together over time, scaled between +1 (perfect positive correlation) and -1 (perfect negative correlation). Diversification and risk reduction are best achieved by combining assets whose returns have not moved in perfect step, or are not perfectly correlated with one another.

Consider the risk formula we described in chapter 3, section 2.8.3 again:

$$\sigma_{AB}^2 = W_A^2 \sigma_A^2 + W_B^2 \sigma_B^2 + 2W_A W_B Cov_{AB}$$

In this case, the risk on a portfolio based on two asset classes A and B depends on the allocation in each asset (W), the risk levels of each (σ^2), and the covariance of the return between them (Cov).

Assume A represents a low-risk and low-return asset, such as an investment grade government bond index, and B represents a high-risk and high-return asset, such as a global equity index. If we allocate more funds in a portfolio to equities (eg, from 50/50 equities and bonds respectively to 60/40), the overall risk of the portfolio will increase. The other contributor to risk is covariance between the two assets.

Risk of the portfolio does not change in a linear fashion with the changes in allocations to the higher-risk asset. Instead, there is a significant and beneficial departure from linearity when the correlation between the two assets moves away from a perfect state. Indeed, as we have seen, a degree of low correlation will provide the greatest diversification benefits to a portfolio.

Let us consider a portfolio that is equally invested in two stocks, P and Q, which exhibit a significant degree of negative correlation (ie, close to -1). The inverse nature of their returns will tend to cancel each other out. As stock P gains in value, this would be offset almost entirely by a corresponding loss in stock Q. When the degree of correlation is lower, there is a greater likelihood that gains in one stock will not very closely resemble (positively or negatively) returns in the other.

If a portfolio manager can find two asset classes that exhibit low (ie, close to zero) correlation, the diversification benefit is maximised. A unique combination of assets with this type of association results in a portfolio that produces a risk-free-type security return. Unfortunately, in practice, it is difficult to find two assets with no correlation; otherwise, everyone would buy into these combinations. At all times, correlations ebb and flow, and the causality is not always apparent.

2.8.2 Historical Asset Class Returns

Theoretically, in the capital asset pricing model (CAPM) a straight-line relationship is assumed between returns and risk on assets since, over a longer term, investors demand a premium (higher return) over a risk-free rate for any additional risk taken.

Equities have historically provided strong long-term returns, although the performance varies markedly by region. They are also subject to considerable volatility, with major market downturns during events such as the global financial crisis of 2007-08 and the COVID-19 pandemic. Emerging markets have offered higher potential returns due to faster economic growth, but they come with greater risk, including political instability and currency fluctuations.

In comparison, bonds tend to offer lower returns but with less volatility. Government bonds, especially US Treasuries, are considered safe havens, so they feature lower on the returns spectrum; while corporate bonds typically provide higher yields, with the yield spread depending on the issuer's creditworthiness.

Property investments, both directly and indirectly through REITs, have historically delivered solid long-term returns, often benefiting from both income generation through rent and property value appreciation. However, property is not immune to market cycles and economic downturns, and this market was one of the most vulnerable during the global financial crisis and onset of COVID-19.

Commodities are more volatile and cyclical in nature, influenced by supply and demand, geopolitical events and market speculation. While they can offer diversification benefits, their returns have often lagged behind equities and bonds in the long term. However, gold has traditionally been seen as a safe haven asset during times of economic instability or high inflation, providing steady, if not spectacular, returns when other markets are underperforming.

It is important for investors to recognise that although high-risk investments offer the potential for higher returns, this return is not guaranteed. It is dispersed over a much broader range about the expected mean. Compared to a low-risk investment, there is the possibility for very low or high return outcomes that depend on the nature of a particular state of the world event. This is why, when we say that the risks are higher, we see a broad dispersion in terms of returns about the mean.

2.8.3 Asset Class Correlation

Securities with similar characteristics can be classified into groups, or asset classes. Each asset class may be distinguished by considering three factors of investment performance, which are:

- historic level of return that the asset class has delivered
- historic level of risk that the asset class has experienced, and
- level of correlation between the investment returns of each asset class.

Each asset class can be located in a unique risk/return space. Statistically, it is assumed that individual asset classes are uncorrelated (or have low correlations) with each other. As a result, the explanatory factors responsible for driving performance in each asset class can also be delineated. Investors can use these differences to consider how likely their investments are to meet their objectives and appetite for risk. It can be possible to even out investment performance over time, by spreading investments across different asset classes.

For example, returns from international equity markets are highly correlated, reflecting the increasing globalisation of those markets. While investors may look to invest overseas, to gain exposure to different industries and companies, most major equity markets now rise and fall together in response to global news and to volatility shocks.

2.8.4 Advantages and Limitations of Historical Data

Historical data can be useful when considering the performance of the individual asset classes during the construction of an investment portfolio.

In practice, historical data can provide valuable information to unearth future investment opportunities – if a trend is present, there may be opportunities to apply forecasting techniques to build reliable forward projections. Past data is also useful for performance measurement purposes, in that it can be used to obtain the key statistical measures of performance (namely returns, standard deviations and correlations). The statistics can then be compared with benchmarks to assess performances or to carry out attribution analysis.

Many forecasts assume that the return distributions are normal; however, with markets exhibiting great levels of volatility, the portfolio manager's job has been made even more difficult. Regular presence of skewed distributions and leptokurtosis (ie, fat tails), and other higher movements continue to present new challenges on the horizon. The opposite of leptokurtosis is platykurtosis (ie, narrow tails), whereby return distributions are stable and predictable (ie, there will rarely, if ever, be any extreme returns).

In recent years, we have seen dramatic changes in financial markets and in the wider global economy that have never been seen before. For example, over the space of just five years from 2007–2012, the financial markets witnessed shocks of mega proportions. First, there was the global financial crisis that began in 2007 which led to a recession across the world. From late-2009, fears of sovereign debt woes developed, embroiling the eurozone in a crisis. In early-2020, the COVID-19 pandemic caused a rapid economic deterioration in stock markets in a way that the world had never seen before; and the energy crisis that began in 2022 resulted in very turbulent stock and bond markets.

Alongside this, over the years, global markets have expanded with the rise of emerging economies (eg, China and India) who are keen to strengthen their economic influence; thus, correlations between asset classes have increased, along with volatility, such that investors and managers today have restricted opportunities for risk diversification.

The stochastic nature of security prices and difficulties in predicting market behaviours reflect increased complexity in the world if there are rapid changes underway. Hence, as far as forecasting is concerned, developing ex-ante forecasts from historical data sets may not always be possible. This is because there are structural shifts and regime changes under way. Charting the progress of asset classes and their securities in this environment and picking out reliable investment has never been easy.

Forecasting is a complex business and utilises high-level mathematical, statistical, economic and financial theory and ideas from many other disciplines, including IT and psychology fields. Even within a controlled markets laboratory setting, it is difficult to know how a growing body of behavioural finance followers will influence market changes in the next decade.

3. Investment Selection

3.1 Costs and Their Impact on Investment

Learning Objective

6.2.2 Analyse and compare charges and costs on the basis of impact, reduction in yield, total expense ratios/ongoing charges and annual management charge

The impact of charges on investment funds is relatively straightforward: higher charges reduce the net returns (and, therefore, the benefits) to investors. In the case of initial charges, higher charges will reduce the amount of money that is actually invested in the product at the start. In the case of ongoing charges, higher charges lead to a reduction in the value of the product over time.

This is not to say that other characteristics of the product are not important; rather that, when comparing two identical funds in terms of the securities they are invested in, consumers will be better off selecting the cheaper fund. This is because over time, the lower fees will result in greater net returns compared to the more expensive fund.

Different types of charges also have different impacts on consumers depending on the length of time that consumers intend to invest their money. Products with high initial charges are likely to be especially costly for those customers who only hold investments for a short period of time. Products with low initial charges but high ongoing charges may end up being particularly costly for customers who hold investments for a long period of time. See section 5.1 of chapter 5 for the different types of charges that funds can apply.

3.1.1 Reduction in Yield (RIY)

The reduction in yield (RIY) is an industry-standard measure of the impact of total charges (ie, it takes into account both initial charges and ongoing charges) applied to a policy.

Fees and expenses have long been a concern for regulators worldwide such that many jurisdictions have implemented policies, processes and procedures to improve disclosures of their charges. This allows investors to compare the charges of different competing funds in the market so that they can make informed investment decisions.

In the US, for example, the SEC requires all mutual funds to disclose all of its fees, as well as its expense ratio, in a standardised table at the front of the prospectus; and, if available, in the summary prospectus. In Asia, several markets require funds to clearly disclose the composition of the fees associated with investing in each share class of that fund.

In the UK and EU, the introduction of MiFID II and PRIIPs brought greater transparency on fund charges, including transaction costs. Fund providers should do the following:

- They are required to take into account both the initial charges and ongoing charges and show the effect of the fund charges on investment over a ten-year workout period.
- They are expected to tabulate results showing the effect of all the fund charges in monetary terms and also as an RIY in percentage terms (eg, this will have the same effect as bringing investment growth down from 6% a year to 4.1% a year). This table is helpful because it reveals the effect of charges at different years and their impact on the terminal wealth at each time.
- They may provide the RIY through a table listing all of the funds covered in that document (instead of using the RIY sentence) if they have disclosure documents covering multiple funds they offer.

The UK's Consumer Duty, which came into effect in July 2023, has brought charges into focus. In particular, firms' charges must provide fair value for consumers; and fund managers have a responsibility to set fund charges so as to avoid providing 'poor value' for end clients.

One limitation of the RIY is that it is presented only at one moment in time, normally after a period of ten years. It does not show the impact of the charges over a shorter holding period, such as three, or even five years. This can cause consumers and advisers to examine charging information at a point in time that does not correspond to their investment horizon.

Additionally, the RIY calculation requires assumptions to be made regarding the growth of investments. This may lead some consumers to have false expectation as to the certainty or level of any returns.

Example

An investor invests £10,000 into a fund, and assumes a growth rate of 5% with investment periods ranging from one to ten years. Each year, the fund makes deductions to cover the costs of running the fund, as shown in the table below.

Effect of Charges Table for Mutual Fund XYZ

At year	Investment (£)	Terminal Wealth (£) @ 5% growth rate	Deductions to date (£)	Terminal Wealth after deductions	Effective RIY (%)
1	10,000	10,500	474	10,026	4.7
3	10,000	11,576	870	10,706	2.7
5	10,000	12,763	1,341	11,422	2.3
10	10,000	16,289	2,943	13,346	2.1

The effect of charges table shows information on charges over time – at the end of years 1,3,5 and 10. This should be useful to a variety of consumers, who can examine the table to see which length of time most closely matches the length of time for which they expect to invest.

The table also shows information on charges in pounds sterling rather than in percentages. This should be useful for investors who struggle to understand percentages and find it easier to examine information in monetary terms.

Note that the actual impact of the charges levied can be much higher for shorter investment periods, as demonstrated in the table. After deductions, the terminal wealth over one year is £10,026, which is effectively a return of only 0.3% (the 4.7% RIY reflects the high cost structure). Over a ten-year period, the effective return after charges is 2.9%, with the RIY now coming in at 2.1%.

3.1.2 Total Expense Ratios (TERs) and Ongoing Charges Figure (OCF)

When information on funds is sent to prospective investors, managers and distributors must disclose details of the associated costs and charges in a prescribed format, so that investors may make informed decisions before investing.

As covered in section 2.6 of chapter 5, funds subject to the UCITS or PRIIPS regimes must provide a key investor information document (KIID) or key information document (KID) to investors respectively. These documents provide details of costs and charges, among other things, and have fundamentally impacted how fund management expenses for retail collectives are reported and collected.

Further, UK and EU firms must include additional charges disclosures consisting of a table showing the effect of charges in monetary terms and an RIY statistic, as providing this information purely as a percentage may be difficult for some investors to grasp.

All in all, this greater transparency on costs has led to fee compression – today, fund providers are continuing to reduce their fees to remain competitive, and this is expected to continue to have a bearing on future charges.

3.2 Research, Reports and Analysis Methods

Learning Objective

6.2.3 Know the research and reports available to financial advisers: fundamental analysis; technical analysis; fund analysis; fund rating agencies and screening software; broker and distributor reports; sector-specific reports

3.2.1 Fundamental and Technical Analysis

Active managers may utilise fundamental and technical analysis when identifying securities. See chapter 3, section 3.8.1.

3.2.2 Fund Analysis

Investment fund analysis involves assessing a number of different aspects of the fund to determine whether they are appropriate to include in the portfolio. These include:

- investment objective
- investment philosophy and process
- fund manager tenure
- past performance (both, discrete and cumulative returns)
- comparison with benchmark and peers
- volatility
- yield and stability of distributions (for income investors)
- assets held in the fund
- initial and ongoing costs
- independent ratings of fund and manager, and
- responsible/sustainable/ethical investment strategy applied (if applicable).

Independent Ratings

Fund analysis can also involve reviewing independent ratings of the fund and its manager. A number of independent ratings agencies exist including Morningstar, Lipper and Fitch which provide analysis and pricing information on investment funds to aid both private investors and investment advisers.

Responsible/Sustainable/Ethical Ratings

Another area to be assessed is whether the responsible/sustainable/ethical investment strategy applied to the fund is appropriate, if applicable.

Environmental, social and governance (ESG) rating providers are an important reference for financial markets in terms of assessing that the underlying securities or projects are as sustainable and responsible as they claim to be. For example:

- Moody's ESG provides research and guidance to organisations and investors interested in a responsible, sustainable or ethical approach.
- MSCI ESG Ratings ranks companies worldwide (the highest being AAA and the lowest being CCC) based on the company's management of its financially relevant ESG risks and opportunities.
- Morningstar's Sustainalytics rates the sustainability of listed companies.
- Morningstar itself provides Sustainability Ratings for mutual funds and ETFs.

However, each ESG rating provider uses their own research methodologies to scrutinise businesses – this, along with subjective interpretation, can result in ESG ratings varying dramatically for the same product. Steps, therefore, need to be taken to improve the transparency of these methodologies.

Other tools for evaluating a company's performance towards sustainable development include:

- compliance (or lack thereof) with stewardship codes and regulations.
- alignment with global or national targets on climate change mitigation and how their outcomes contribute to those targets, and
- inclusion in a responsible, sustainable or ethical index.

Additionally, a company's voting policies and track record can provide a useful insight into their environmental and social philosophy.

This is by no means an exhaustive list, but it gives an indication of the tools that are available.

3.2.3 Brokers and Distributor Reports

Research and analysis are available from a vast number of sources, including brokers and distributors of funds. This is usually available as periodical updates on fund performance and market commentaries, with input from research analysts and fund managers on market direction.

The analysts within brokerage firms analyse and compare companies on a day-to-day basis. They are professionals who understand the value of a company and its stock. They also have a tremendous amount of information and historical data at their fingertips which they can sift through to make informed investment decisions.

3.2.4 Sector-Specific Reports

There is no shortage of news in the marketplace. In fact, in the modern era, the sheer amount of news and inundation of information can be overwhelming. Thus, some research providers produce sector-specific reports, which are designed to help investors to get a complete picture of a specific sector in one single place.

As their name suggests, sector-specific reports provide broad coverage of the sector in question including general news, economic conditions, market fundamentals, trends and expert analysis. Thus, they can give valuable and detailed insight into specific sectors. For example, S&P Global and the Institute of Chartered Accountants in England and Wales (ICAEW) provide reports covering a wide variety of sectors including financial institutions, FinTech, energy, industrials, construction, mining, technology, real estate and retail, among others.

3.3 Factors to Consider when Selecting Investment Product Providers

Learning Objective

6.2.4 Analyse the factors to consider when selecting investment product providers

When choosing a suitable provider for an investment product, it is worth considering the following:

- **Their size and position in the market** – to have and maintain a strong position in the market, investment product providers must ensure that their products and services are of the highest quality, and be able to stand out above their competitors. Market leaders tend to offer superior quality at lower risk, so they are more likely to be trusted by consumers.
- **Reputation** – providers with strong reputations provide comfort of previous client satisfaction.
- **Fees and charges** – charges are an important consideration, as the lower the charges, the better the potential scope for returns.
- **Features and benefits of product compared to peer offerings** – this helps to ensure that the products and services offered by the investment product provider are suitable for the client's financial needs, and in terms of what other products are on offer in the marketplace.
- **Investment track record** – this provides an indication as to the provider's success rate. While the past record does not guarantee future results, an unsatisfactory track record can indicate that the provider may not be able to perform successfully going forward.
- **Financial rating** – the higher the financial rating, the less likely the investment product provider will suffer financial problems and cease operating.
- **ESG rating and strategy** – some providers may engage in unethical, irresponsible and unsustainable practices, which may deter some customers.
- **Customer service** – easy access to advice and support can be beneficial for customers.
- **Regulatory track record** – a solid regulatory track record provides customers with confidence that they are dealing with a high-quality provider.

3.4 Wraps and Other Platforms

Learning Objective

6.2.5 Understand the characteristics, uses, benefits, risks and charges associated with wraps and other platforms

Wraps originated in Australia, but have been in use in various other countries for a number of years. Wrap platforms generally offer clients the ability to invest in a variety of different products via a single provider.

The wrap account provides the investor with access to:

- a cash account, used for dealing with purchases and sales, and for the payment of any associated management fees
- a pension account with the usual tax advantages
- an ISA, and
- an offshore/onshore investment bond.

Wrap platforms have many advantages for both investors and advisers.

For the investor, they offer an unprecedented overview and control of their investments, savings and pensions; and the possibility of a far greater choice in terms of fund managers, providers and asset classes.

For the adviser, they offer greater automation, much improved efficiency, and the potential to offer almost instant valuations, meaning lower costs and the ability to offer a better service. In short, it should mean they can spend more time actually advising their clients and rather less on paperwork. The ability to manage client assets centrally in an administratively efficient way is proving advantageous in the post-RDR world and enables advisers to offer a transparent fee structure and specific service levels to meet their clients' requirements.

In terms of risks, the client's assets are always held separately from those of the wrap provider, and so the failure of that business will not affect them. Cash up to a specific limit is covered by a deposit protection scheme (eg, in the UK, up to £85,000 under the FSCS).

Wrap account providers make their money by charging a fee for using the account. Initial costs may also be levied on setting up the account and for any subsequent additional investment. Most platforms have negotiated discounts with fund managers and are able to offer reduced dealing costs on a range of investment funds.

Wraps offer complete transparency and clients can see what they are paying and to whom. Advisers are able to agree a service level and set their charges appropriately.

On the other hand, one disadvantage of wrap platforms is their flexibility: with only a limited range of assets available, this may make platforms suitable for restricted advice only. They can also be relatively expensive, as platforms usually levy a wrap fee plus the usual costs of the underlying funds held, while others may impose annual fixed charges. For this reason, they tend to be more cost-effective for clients with larger portfolios.

Key Chapter Points

- Asset allocation is an important component of financial advice, both in terms of meeting investment objectives and of reflecting the client's risk profile.
- It is split into two parts: strategic asset allocation (SAA; long term) and tactical asset allocation (TAA; short term).
- Typically, a conservative investor will have a higher exposure to deposit-based and fixed-interest investments; and a more adventurous one will have a higher exposure to equities, including areas considered to be more risk such as emerging markets.
- Individual circumstances including commitments, experience, life-cycle stage, age and wealth are factors to consider in designing a portfolio.
- Investment portfolios need to be affordable, taking into account changes in circumstances as far as possible, and they need to be suitable for the client. The level of accessibility must be assessed, to allow liquidity when it is needed.
- Risk tolerance comprises two factors - attitude to risk (ATR) and capacity for loss (CFL) which may be graded by firms; for example, using the terms 'cautious' (or 'conservative'), 'moderate' (or 'balanced') and 'adventurous' (or 'aggressive'). The proportion of risky asset types in a portfolio will likely vary according to the desired overall level of risk.
- Risky investments should not generally be undertaken if the investment timescale is short, as short-term fluctuations can lead to losses.
- Lower returns generally correlate with lower risk (ie, safer) investments. While high-risk investments offer the potential for higher returns, this return is not guaranteed.

End of Chapter Questions

Think of an answer for each question and refer to the appropriate workbook section for confirmation.

1. **What is the difference between deterministic and stochastic modelling?**
   Answer reference: Section 2.2

2. **Which of the following strategies is better suited for a client: active or passive investing?**
   Answer reference: Section 2.3

3. **How does strategic asset allocation (SAA) differ from tactical asset allocation (TAA)?**
   Answer reference: Sections 2.4 and 2.5

4. **In what ways can a portfolio be diversified?**
   Answer reference: Section 2.7

5. **When are diversification and risk reduction best achieved?**
   Answer reference: Section 2.8.1

6. **What are the benefits and limitations of using historical data for investment forecasting?**
   Answer reference: Section 2.8.4

7. **What is one limitation of reduction in yield (RIY)?**
   Answer reference: Section 3.1.1

8. **Why can ESG ratings for the same product vary dramatically between ESG rating providers?**
   Answer reference: Section 3.2.2

9. **What are sector-specific reports designed for?**
   Answer reference: Section 3.2.4

10. **What advantages do wrap platforms offer investors?**
    Answer reference: Section 3.4

Chapter Seven

The Process of Giving Investment Advice

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This syllabus area will provide approximately 13 of the 80 examination questions

1. Advising Clients



Learning Objective

7.1.1 Apply a framework for providing financial advice, paying particular attention to: the nature of the client relationship, confidentiality, trust and client protection; the information required from clients and methods of obtaining it; monitoring and review of clients' circumstances and protection requirements; the information clients must be given under the current regulatory requirements; additional requirements needed when advising on unregulated retail products; later life planning; specific obligations for vulnerable clients

7.1.4 Understand the purpose, merits and limitations of using questionnaires and interviews to elicit customer information

1.1 The Nature of the Client Relationship

The relationship between a client and a financial adviser is very important to the success of the planning process. We could think about this relationship from three different perspectives, which an adviser might need to foster such a relationship:

- **Legal** – in some cases, a financial adviser will be an independent financial adviser (IFA), or part of an IFA firm. The adviser acts as the client's agent in any transactions they arrange on their behalf and is responsible for providing them with advice based on a selection of suitable options.
  In other cases, the adviser may be an employee of a single product provider (or of a provider offering its own and a small range of other providers' products) or be restricted and not independent.

The adviser acts as the agent of the provider(s), not of the client; and must inform the client about the limitations of their service. This is often referred to as 'restricted advice'.

These differing legal relationships must be disclosed to the customer and mean different legal responsibilities to customers.

- **Personal** – to provide appropriate advice, financial advisers need a good deal of detailed background (and, sometimes, personal and sensitive) information about their clients. A client will only disclose this information openly and frankly if they trust their adviser's integrity, confidentiality and capabilities.
- **Skills** – an adviser needs special skills to foster a successful relationship with their client. These include:
  - **Trust building** – the adviser needs to create a trusting and open relationship with their client. They may need to be sensitive in questioning the client on personal matters, and conciliatory in persuading them to provide background details which they may not initially wish to divulge (eg, for anti-money laundering (AML) purposes).
  - **Organisational** – the adviser needs to be able to juggle a full diary of initial contacts and follow-up and repeat meetings. They, therefore, need to be well-organised and disciplined in managing their diary and activities, and thorough in completing paperwork promptly.
  - **Technical competence** – they need to have the necessary technical knowledge and skills if they are to gain their clients' confidence and provide a competent service.
  - **Integrity** – the client must have absolute confidence in their adviser's integrity; they will be trusting the adviser with a great deal of sensitive financial information, which must not be improperly disclosed or otherwise abused.

1.2 Information Required of Clients and How to Obtain It

To carry out their role in a fiduciary capacity properly, the adviser is duty bound to act in the best interests of the client. To be able to provide appropriate advice, the adviser needs a clear picture of the client's current and planned financial situation. To achieve this, information has to be gathered from the client – and, to ensure that this is done in an organised and structured way, this is invariably done by way of a standardised form. Some form of investment policy statement (IPS) will need to be obtained and maintained by the adviser – see chapter 6, section 1. Therefore, the adviser (in a fiduciary capacity) cannot begin the investment management process until the client's objectives, risk parameters, and other circumstances are clarified, and confirmed (in writing) by the client.

1.2.1 Client Information Collection Methods

There is no simple way of quickly establishing all relevant information about a client, nor is there a single correct way of collecting all required information.

Collection of information may be done face-to-face or at a distance; this will depend on the adviser's method of delivering services.

The adviser may wish to undertake a face-to-face interview with the client to understand what existing assets and liabilities they have before they can turn to developing a true understanding of what their needs are. Interviews are still popular for many, especially those dealing with the very wealthy or those who value a high level of personal service. However, such interviews can be potentially lengthy.

Notably, an increasing number of firms are growing by attracting clients not based in their local geographic area. The COVID-19 pandemic has accelerated the shift towards a more digital world, including conducting meetings online and accommodating electronic signatures. With more clients using the internet, as well as advances in technology such as video conferencing tools, this makes it easier for advisers to meet with clients, and for clients to sign up for products and services, at a distance.

Most firms use a fact find (also called a 'know your client' (KYC) questionnaire or something similar). Often, the adviser completes the fact find during an interview with the client so that the information is collected in a logical and straightforward manner, and is available for later use. The fact find will be a fairly lengthy document, which should collect not only the client's basic details, but also their financial background and information to build a picture of their plans and aspirations.

The advantage of a fact find is in its consistency, the factual record it creates, and the opportunity for quality checking that it provides. Its disadvantages are:

- it is time consuming to complete
- the customer's reaction to what they may perceive as a lengthy form-filling exercise; hence, the need for communication skills arises (see section 6)
- it does not necessarily cover all the bases; hence, the adviser/manager must also have a discussion with the client alongside it, and
- if the fact find is not completed correctly, the implications can be costly.

Only after completing the fact find can the adviser start on the next significant exercise – identify potential solutions, and then match these to the client's needs and demands.

1.2.2 Information Required from Clients

The types of information that the adviser needs to obtain from clients are shown below. It is essential that the adviser does not see this as a simple data collection exercise. Rather, they must see beyond the headings, as to why the information is needed and what this may show about the financial position and needs of the client.

Personal Details

- Name, residential and correspondence address.
- Age and date of birth.
- Marital status.
- Details of any spouse/partner, children and other dependants.
- Basic health information.
- Occupation (self-employed, employed, or unemployed).
- Nationality, residence and domicile, for tax purposes.

Often, at this point, anti-money laundering (AML) information will be sought to verify the customer's identity and address.

Current Financial Situation

This may take the form of a mini-balance sheet for the client, listing all their major financial and other assets (including pensions) and liabilities (eg, credit card debts, mortgages, and overdrafts).

Current Income and Outgoings

Income may include items such as the following:

- Earned income from employment and self-employment, including any income from pensions.
- Unearned income on investments and deposits.
- Rents on an investment property.
- Financial support from others (eg, a former spouse/civil partner).
- State benefits – eg, the state pension, Universal Credit, Jobseeker's Allowance, disability-related benefits and housing support. Each type has different amounts and eligibility criteria, which advisers must understand in order to provide accurate and appropriate financial advice.

Outgoings may include:

- Rent or mortgage payments.
- Bills for food, heating and electricity.
- Rates/council tax.
- Vehicle running costs, including fuel, tax, insurance, breakdown cover and servicing.
- Maintenance paid to a former spouse/partner or in respect of a child.
- Credit card and loan outgoings.
- Regular insurance premiums.
- Contributions to regular savings plans and pensions.
- Sums budgeted for occasional spending such as holidays, birthdays and Christmas presents.

Expected Income and Outgoings

Here the client should list income and outgoings which are currently not in force, but are expected in the foreseeable future (eg, potential inheritances, school fees, or a planned holiday).

Other Arrangements

This includes details of any insurance/protection, pension, and estate planning arrangements (eg, wills) that the adviser reasonably ought to be aware of. The adviser will then be able to identify any gaps in the current plan and advise them accordingly.

Aspirations and Goals

The customer should list their goals and aspirations that may require some financial planning. Examples include:

- Hopes of retiring earlier than the state retirement age.
- A second home abroad.
- A move to a bigger house, or better area, or perhaps putting down a deposit on a first home.
- An expensive cruise to celebrate a significant anniversary.

Together, these elements give the financial adviser a snapshot of where the customer is now; an idea of their current and expected cash flows; and an idea of both their near-term objectives and where they hope to be in some years' time.

The adviser then translates these aspirations and goals into a measurable investment objective, which determines the overall investment strategy that will drive the investment planning process.

For example:

- maximising future growth
- protecting the real value of capital
- generating an essential level of income, or
- protecting against future events.

Having determined the client's overall financial objectives, the adviser also needs to know how the choice of investments will be guided, Investment objectives are often categorised into:

- **Income** – investors seek a higher current income at the expense of potential future capital growth.
- **Income and growth** – investors need a certain amount of current income but also invest to achieve potential future growth in income and capital.
- **Growth** – investors do not seek income, and their primary objective is capital appreciation.
- **Outright growth** – the investor is seeking maximum return through a broad range of investment strategies, which generally involve a high level of risk.

It is also worth noting that an individual client may have more than one financial objective (eg, funding school fees, while also maximising growth to provide funds needed in retirement).

Risk Tolerance

A client needs to have a very clear understanding of their tolerance to risk, as it is essential to choosing the right investment objectives. In many ways, risk tolerance is subjective and very much depends upon the emotional make-up of a person. It is also objective, in that their personal circumstances will affect how much risk they can assume. For example, age: as people get older, there is less time to recover from poor investment decisions or market falls, and so the appetite to take risk may change.

While risk itself can be an emotional topic, establishing a client's tolerance for risk need not be based on emotions. Instead, it can be determined by looking at the risks involved in reaching the client's investment goals; if the client feels that these risks are too great, then their objective may need to be adjusted.

It is also worth noting that an individual client may have more than one risk tolerance. For example, a client with a longer period of time to retirement may have a pension that is managed in line with an adventurous level of risk, as it will have time to grow until their eventual retirement; and another, more conservatively-managed portfolio, to help cover their shorter-term financial needs.

Risk and client suitability are covered in more detail in section 2.2.

Liquidity

An understanding of a client's liquidity requirements is essential, as this will also have a clear impact on the selection and construction of any investments.

Liquidity refers to the amount of funds that a client may need in both the short and long term. When constructing an investment portfolio, it is highly recommended to set aside an emergency cash reserve that the client can access if needed without disturbing longer-term investments.

If known liabilities arise in future years, consideration should also be given as to how funds will be realised at that time. Consideration needs to be given as to whether it is sensible to plan on realising profits from equities, as market conditions may require losses to be established unnecessarily. Instead, conservative standards suggest investing an appropriate amount in bonds that will mature close to the time when money is needed, so there is certainty of the availability of funds.

Whatever a client's requirements, it is important that they maintain sufficient liquidity to meet both known commitments and possible contingencies.

Time Horizon

Similarly, time horizon is also a critical factor. This refers to the period over which a client can consider investing their funds. While definitions of time horizons vary, short term is usually considered to be up to five years, medium term between five and ten years, and long term over ten years.

Time horizon is very relevant when selecting the types of investment that may be suitable for a client. For example, it is generally stated that an investor should only invest in equities if they can do so for a minimum period of five years, if not longer (so they may ride out periods of market volatility); whereas for those who wish to invest for a shorter period, cash and short-dated bonds may be more suitable.

Tax Status

The adviser will also need to establish the client's residence and domicile to identify their tax status. In doing so, the adviser will then be able to establish their liability to taxes (income, capital gains and inheritance), and what allowances and reliefs are available (including for pensions and ISAs). It will also impact the suitability of products; for example, a high-yielding bond may not be suitable for an additional rate UK-resident taxpayer if held outside a wrapper, as the income generated would be taxed at 45%.

Investment Preferences

Clients may have responsible, sustainable or ethical considerations, or perhaps some other restriction of which the adviser should be aware. For example, they may wish to retain an asset for sentimental reasons, or to avoid investment in a particular area due to a large holding in another portfolio elsewhere, thereby avoiding overexposure.

New MiFID II rules came into effect in the EU in 2021 whereby advisers must include questions on responsible, sustainable and ethical investing in the fact find. As this date is after the end of the UK's transition period with the EU, this rule does not apply in the UK as yet. That said, under the *'Know Your Client' (KYC)* rules and best practice, advisers must obtain necessary information from clients to be able to make suitable recommendations; therefore, questions about their responsible/sustainable/ethical preferences could form part of the fact find process, to help ensure that any recommendations do not conflict with those preferences.

Exercise

Use the following table or a separate piece of paper to record why such information might be needed to allow an adviser to form a financial plan.

Information needed	Why needed?
Personal details	
Health status	
Details of family and dependants	
Details of occupation, earnings and other income sources	
Estimates of present and anticipated outgoings	
Assets and liabilities	
Any pension arrangements	
Potential inheritances and any estate planning arrangements, such as a will	
Financial aspirations and goals	
Tax status	
Investment time horizon	
Tax status	
Investment preferences	

Be aware that the scale of potential information that will be needed is significant, so there is no simple 'right' answer and it gives an indication as to why the information might be relevant. Everyone is different, so the information needed will vary from person to person.

1.2.3 Vulnerable Clients

Worldwide, regulators expect firms to pay particular attention to vulnerable clients. This is necessary because much consumer protection legislation is designed for the average or typical client. In contrast, vulnerable clients may be less able to represent their own interests, may have different needs, and may have more behavioural biases that negatively impact their decision making.

Consequently, vulnerable clients are especially susceptible to harm – for example, they are more likely to be partially or fully financially excluded, buy inappropriate products and services, or be exposed to mis-selling, scams and financial abuses.

Importantly, advisers must regularly monitor and review clients' circumstances and protection requirements to ensure that their financial plans remain aligned with their evolving needs. Life events such as marriage, having children, career changes and health issues can significantly impact their financial position and protection needs. In terms of their protection requirements, periodic reviews can help to identify gaps in insurance coverage, ensure policies remain cost-effective, and confirm that investments and estate planning strategies continue to support their long-term objectives. Monitoring and reviews are covered in more detail in section 1.10 of this chapter.

The four key drivers of vulnerability are:

1. **Health** – serious or terminal illness could impact a client's ability to make decisions. Also, illness could cause the client to lose money and incur extra costs, damaging their finances.
2. **Resilience** – a client with a low level of resilience (eg, low or erratic income, low savings, low emotional resilience and/or high levels of debt) is less likely to be able to withstand financial or emotional shocks.
3. **Life events** – a change in the individual's circumstances such as divorce, bereavement and redundancy could impact a client's ability to make decisions, because they may be forced into dealing with more complex financial situations than they are used to.
4. **Capacity** – a client who is illiterate, has learning difficulties and/or neurodevelopmental disorders may be vulnerable. Others might struggle to assess financial products or find it difficult to shop around, while some have fallen into debt, which might have been avoidable if they had been able to understand their options better.

That said, other factors can make clients vulnerable as well. For example, the client may:

- **Have reliance on another** (eg, a friend or family member) – this suggests a client's incapability of making their own decisions. Advisers should consider whether the third party is applying undue influence on the client.
- **Display unusual behaviour** – this may indicate a cognitive (eg, dementia) or mental health issue (eg, depression), which impairs a client's ability to make decisions. Other examples are as follows:
    - Multiple, unusual withdrawal requests in a short period of time may indicate that a client is being defrauded or pressured into passing on money, or they may have forgotten they made previous requests.
    - A very elderly client who requests to fully encash their investments – the adviser should consider whether there is any coercion or undue influence, in which case, they may have to inform their compliance/financial crime department for assistance.
- **Be unresponsive** – when a client is not responding, uncontactable or unusually quiet, this could signal they are generally struggling with finances or experiencing difficult external events which are a barrier to them.
- **Have difficulties filling in forms clearly and correctly** – this could indicate illiteracy or other problems (eg, early dementia) that are making it difficult for them to complete such forms.

Interacting with Vulnerable Clients

When interacting with vulnerable clients, advisers should deal with them in a manner that encourages them to be open and honest about any difficulties they may have. Advisers should then adapt their approach to accommodate the client's needs.

Specifically, advisers must:

- Provide tailored and suitable advice in a format that the client can access and understand, which is fair, clear and not misleading.
- Discuss having a trusted family member/friend present at meetings, which must be arranged beforehand.
- Ensure there is appropriate authority on file before discussing matters with a third person. For example, a power of attorney (POA) is a legal document that allows a third party to make decisions for someone, or on their behalf, if they are no longer able/want to; and if the client does not have a POA, this should be discussed with them.
- Document matters and refer to their compliance/financial crime department, if they believe or suspect that the client is under duress.
- Ensure that partially sighted clients, or those with hearing difficulties, are aided and supported.

Documenting Advice to Vulnerable Clients

To demonstrate that advisers have considered a client's circumstances, they must document the following:

- Any identified vulnerability and the steps that should be taken to accommodate the client's needs.
- Record details of a trusted family member/ friend who should be present at meetings.
- Details of the client's medical history, including an indication of the severity of any illness.
- Detail any impairment (eg, sight, hearing and illiteracy).
- Record any advice which is not proceeded with, and the reasons why the client has not done so.

It is the adviser's responsibility to decide whether a client should be treated as vulnerable. It is important to note that vulnerability can be permanent or temporary, and it may change over time. For example, a client with a permanent disability will be permanently vulnerable, but one who has recently been made redundant may only be vulnerable temporarily.

1.3 Matching Client Needs with Solutions

This picture of where the client is (or hopes they are) headed is an important area and one where a good adviser can be of considerable help to them. This is because, before they think about it in any structured way, many clients have a jumble of competing needs and aspirations. Some of these are more important than others, and many may not be able to be realistically achieved at all – or at least not if other aspirations are also to be prioritised. Few clients are lucky enough to have so much money that they can afford to meet all their needs, goals and aspirations immediately.

For example, in terms of importance:

- Certain financial outgoings must be paid if the client is to comply with the law (eg, taxes).
- Some are very important (eg, keeping up insurance premiums to protect dependants).
- Others are less urgent, even if they feel more like needs than wants (eg, an urgent desire for a new car).

Therefore, certain items should be prioritised ahead of others on the grounds of their importance. Even then, there may be several other things which the client would like to do but which they cannot afford to do all of, or not all at once. For example, the client may want to trade up to a bigger car, extend the house to have more space, take the family abroad on holiday or cut back on working hours by one day a week to spend more time with the children.

It may be that a financial plan can be arrived at to achieve many of these aims, if only one of them is dropped or postponed. Alternatively, the client may have some aspirations which are simply never going to be achieved in the foreseeable future. Often, the adviser can help them organise their thoughts and prioritise which of their hopes and aspirations they are going to focus on and which ones they should (at least for now) treat as merely a wish list.

1.4 Advising on Unregulated Retail Products

Advisers should note that in the UK, the FCA's rules on adviser charging and remuneration (under COBS 6.1) addressed much needed reforms to retail investment products.

One implication of the redefinition of 'retail investment product' is that advisers may feel there is scope to widen promotional efforts to hedge funds and other non-retail schemes to their clients. At the same time, IFAs are duty bound to perform 'a comprehensive and fair analysis of the relevant market'.

Since 2013, the promotion of UCIS and similar complex investments – collectively known as non-mainstream pooled investments (NMPIs) – to retail investors in the UK has been banned to reduce the risk of consumer harm. As retail consumers do not have the relevant knowledge and experience to assess such investments, they face a significant risk of detriment. COBS 4.12 provides details of restrictions on the promotion of NMPIs, and UCISs are subject to a statutory restriction on promotion in Section 238 of the **Financial Services & Markets Act (FSMA) 2000.**

While IFAs can still consider investing in UCIS for their clients, they must have undertaken thorough due diligence on the suitability of the UCIS and the wrapper that it is in.

1.5 Later Life Planning

Later life planning, which ensures that individuals have the resources and protection they need as they age, should form a key part of an adviser's financial strategy. This involves careful consideration of retirement income, estate planning, long-term care funding and inheritance tax planning (IHT), among other factors.

Advisers help clients to structure their pensions, investments and savings to provide sustainable income while managing tax efficiency. Options such as drawdown pensions, annuities and equity release may be explored to secure financial stability in later years (note that equity release and certain later life products require additional FCA authorisation for advisers to provide advice on those products). Additionally, ensuring adequate protection through lasting powers of attorney (LPAs, which allow trusted individuals to make financial or healthcare decisions on someone else's behalf) and healthcare planning can help clients to prepare for potential loss of mental or physical capacity.

A well-structured estate plan ensures that wealth is passed on efficiently to beneficiaries while minimising IHT liabilities. This may involve the use of trusts, gifting strategies or life insurance policies to mitigate tax exposure. Planning for long-term care costs is another essential consideration, as care home fees can significantly deplete assets without proper preparation.

All in all, a proactive approach to later life planning can allow individuals to maintain financial independence and protect their assets, while also providing for their loved ones.

1.6 Information to Clients Under the Current Regulatory Requirements

Regulations set out the nature, and usually the content, of information that financial advisers must provide to their clients. These obligations extend not only to the advice that the adviser provides (including why they are suitable; and the benefits, disadvantages, risks and costs), but also to the adviser's own regulated status, how they work and on what basis charges are paid.

Under the Conduct of Business Sourcebook (COBS) rules, advisers must disclose key details about their services, fees and the nature of advice provided. Clients must be informed whether the advice is independent or restricted (ie, whether it covers the whole market or only a limited selection of products or providers). Advisers must also explain how they are remunerated, whether through fees paid by the client or commission.

Before making any recommendations, advisers must carry out a fact finding process, as discussed in section 1.2, to assess the client's financial situation, objectives and attitude to risk. This information must be documented in a suitability assessment, which forms the basis of the advice given. Clients must receive a suitability report outlining why a particular investment or financial product is appropriate for their needs, with clear explanations of risks, costs and potential returns.

For investment products, advisers must also provide KIIDs/KIDs and key features documents (KFDs) to ensure that clients understand the key aspects of the investment before proceeding.

Finally, clients must be informed of their rights, including the ability to cancel certain financial products within a cooling-off period, and the right to complain to the Financial Ombudsman Service (FOS) if they are dissatisfied with the service received.

All information that firms and advisers provide to clients must be clear, fair and not misleading in accordance with FCA regulations.

1.7 Robo-Advisors

Learning Objective

7.1.5 Understand the purpose, merits and limitations of using a robo-advisor

Robo-advisors are digital platforms that provide financial and investment services with little human interaction (if any at all). Typically, robo-advisors use online surveys to collect information from clients about their financial situation and future goals. This data is then fed into an algorithm which automatically allocates the client's assets and builds a portfolio of diversified investments. Thereafter, the software automatically rebalances the portfolio on an ongoing basis, so it remains aligned with the target asset allocation. Some robo-advisors can also assess the CGT position of a portfolio, whereby they sell securities at a loss to offset gains in others, thus reducing the client's tax bill. This process is called 'tax-loss harvesting'.

Robo-advisors can be suitable for a range of investors – from beginners, who do not yet have the financial knowledge to make informed investment decisions; to professionals, who may not have the time to actively manage their own portfolio. They can also be a solution for investors with simple strategies, or those who do not wish to hire a financial adviser but at the same time have little desire to select their own investments.

On the other hand, automated portfolio management solutions may not be ideal for investors who prefer human assistance or need a more tailored approach, as well as those with multiple investment accounts.

Merits of Using a Robo-Advisor

- **Easy account setup** – users simply answer questions about their financial goals and risk tolerance; they are then placed into a portfolio that matches their personal investment profile.
- **Automated processes** – once a client opens their account, it is automatically managed and rebalanced by the robo-advisor.
- **Low minimum balances** – whereas wealth firms generally require higher initial amounts, robo-advisors can be accessed by small net worth investors (eg, initial deposit of £250, or £25 per month).
- **Low fees and charges** – fees can be either a fixed amount in monetary terms (depending on the portfolio size), or a percentage of the value of the assets (typically 0.25% to 0.50% a year).
- **Provide a variety of financial solutions** – clients may invest in a range of sectors or themes. Portfolios of low-cost ETFs and mutual funds employing ethical criteria can also be constructed using algorithms.
- **Tax efficient** – many robo-advisors offer services that help investors to increase their after-tax returns (eg, tax-loss harvesting).
- **Remove behavioural biases from investing activities** – robo-advisors can remove common behavioural biases exhibited in humans, such as the tendency to panic-sell in a market downturn.

Limitations of Using a Robo-Advisor

- **Not personalised** – investors tend to have many goals, both in the short and long term. While clients may be allowed to set and amend their goals using financial planning software, it can be beneficial for them to talk with a financial adviser in person about any money-related issues and concerns. Financial advisers can also reassure clients after a significant drop in the markets.
- **Not for clients with complex portfolios** – sophisticated investors may wish to have a broader investment portfolio with a wider range of asset classes (eg, options) which robo-advisors do not typically offer.
- **Fees and charges** – some robo-advisors charge an initial set-up fee, plus ongoing portfolio monitoring fees. Others have sliding scales for their annual fees, based on the account balance. All in all, the amounts can be comparable to fees charged by financial advisers. Additionally, some robo-advisors are not as cheap as passive funds.
- **Limitations in technology** – it is argued that robo-advisors should be used as a tool that help financial planners to implement and manage clients' investment portfolios.
- **Performance is not guaranteed** – while this is true of any investment, investors should be aware that they are still exposed to market risk through a robo-advisor.

As with any important life choice, investors should carefully consider which type of investment guidance they need and select the type of service that best suits their individual style.

1.8 Fair Treatment of Customers (FTOC)

Learning Objective

7.1.3 Apply the FCA's Consumer Duty and the four outcomes that firms should achieve in supporting the requirements of Principle 12

As its name suggests, FTOC places an emphasis on the fair treatment of customers by firms in the financial services sector, and the FCA expects that this is fully embedded in firms. Introduced in 2006, it aims to support the requirements of the FCA's Principle 6 (PRIN 6: Customers' interests) of the Principles for Businesses, which states:

'A firm must pay due regard to the interests of its customers and treat them fairly'

The Principles are covered in section 2.7.1 of this chapter.

Organisations already must operate in accordance with a set of principles that include the requirement to act with integrity, consider the information needs of their customers, and other similarly fair approaches to doing business. FTOC forces providers to demonstrate that they are behaving fairly in all areas of their activities, from the way in which they communicate with their customers, to the quality of their advice.

FTOC is, therefore, an important issue in the ongoing assessment of the suitability of advice, and advisers undertake a thorough assessment of the client's circumstances, taking into account attitude to risk (ATR) and affordability (see sections 2.2 and 2.7 of this chapter respectively). Also importantly, the consequences of any recommended plan of action must be clearly and properly explained to the customer, in a language which they are likely to be able to understand, including the costs and risks involved.

The FCA's retail regulatory agenda aims to ensure an efficient and effective market and thereby help consumers to achieve a fair deal through the use of the FTOC initiative. This initiative aims to deliver six improved outcomes for retail consumers, which firms should be focused on trying to achieve:

- **Outcome 1 –** consumers can be confident that they are dealing with firms where the fair treatment of customers is central to the corporate culture.
- **Outcome 2 –** products and services that are marketed and sold in the retail market are designed to meet the needs of identified consumer groups and are targeted accordingly.
- **Outcome 3 –** consumers are provided clear information and are kept appropriately informed before, during and after the point of sale.
- **Outcome 4 –** if consumers receive advice, the advice is suitable and takes account of their circumstances.
- **Outcome 5 –** consumers are provided with products that perform as firms have led them to expect, and the associated service is of an acceptable standard and as they have been led to expect.
- **Outcome 6 –** consumers are not subjected to unreasonable post-sale barriers imposed by firms in order to change products, switch providers, submit a claim or file a complaint.

The focus of FTOC is on 'conduct risk' which goes further than what was expected of firms in the past. Conduct risk is defined by the regulator as 'the risk that firms' behaviour will result in poor outcomes for customers. The regulator's attention is focused on the risks to the delivery of fair customer outcomes in addition to the actual outcomes themselves.

While the FCA recognises that consumers have responsibility for the decisions they make, consumers cannot always be expected to have enough financial knowledge, information and understanding of complex products, or of the risks associated with them, to decide the best financial course of action for them. The FCA therefore wants to see a higher level of consumer protection in the retail financial market.

Therefore, following a consultation, the FCA introduced Consumer Duty through the Financial Services Act 2021 – this came into force on 31 July 2023 for new and existing products that are open to sale or renewal, and from 31 July 2024 for closed products or services (ie, those that are no longer on sale to new customers, or are available for renewal by existing customers). Consumer Duty is underpinned by three 'cross-cutting' rules that set out how businesses should act to deliver good customer outcomes:

1. Act in good faith toward retail customers.
2. Avoid foreseeable harm to retail customers.
3. Enable and support retail customers to pursue their financial objectives.

It requires firms to consider what outcomes consumers should be able to expect from their products and services, act to enable (rather than hinder) these outcomes, and assess the effectiveness of their actions. While Consumer Duty will replace PRIN 6 as well as PRIN 7 (Communications with clients), these two Principles will not be removed from the regulatory landscape altogether.

Consumer Duty applies to all firms with a key role in delivering retail customer services, even if they do not have a direct customer relationship. The concept of FTOC will still apply to those clients that are out of the scope of the Consumer Duty due to exemptions and/or because they are classified as a professional client or eligible counterparty.

In supporting the requirements of the FCA's Principle 12, firms should aim to achieve the following four consumer outcomes:

1. **Products and service**s – financial products are designed to align with the needs, characteristics and objectives of a specific customer group and are distributed appropriately. While the FCA has introduced product governance rules that apply across all sectors, they will not apply where products are subject to existing product governance rules in PROD 3 (MiFID), PROD 4 (Insurance Distribution Directive (IDD) and pathway investments) or PROD 7 (funeral plans).
2. **Price and value** – customers must receive fair value; this is not solely based on price, but on the reasonable relationship between the price paid and the overall benefit received. The Consumer Duty allows for differential pricing between new and existing customers, as long as upfront discounts are transparent and justified to ensure fair value for both groups. Manufacturers must conduct regular value assessments of their products, considering factors such as benefits, limitations, total price and vulnerability in the target market; and they must share essential information with distributors. Distributors must ensure fair value in relation to products they distribute to retail customers; in particular, they must consider the fair value when the product is to be distributed with another product (whether as part of a package or not).
3. **Consumer understanding** – firms must provide timely and comprehensible information to enable consumers to make informed decisions about financial products and services. Firms must test their communications to ensure understanding; testing can take different forms, some examples of which the FCA has set out in FG22/5. Additionally, firms must follow existing disclosure requirements; and consider what additional steps they can take to support consumer comprehension, particularly when conveying complex information. Further, non-advisory firms should equip customers with decision-making information in a way that does not amount to advice.
4. **Consumer support** – firms must provide tailored support throughout the customer relationship, addressing the needs of all customers, including those with characteristics of vulnerability. Firms offering digital-only support are not required to provide an additional non-digital full-service channel, but must ensure an exceptions process to deal with non-standard issues. Potentially, this will require firms to put in place a real-time human interface, such as a phone service, for effective support.

1.9 Paying for Advice

Learning Objective

7.1.2 Understand how financial advice can be paid for: adviser charging; commission; nature and frequency of service to be provided (including discretionary and non-discretionary portfolio management)

Whenever a firm conducts investment business for a customer, it must make the customer aware of the costs so that they are better able to make informed choices. It has to do so in writing and before it conducts any business. It must also disclose any product-related charges and any commissions it may receive from a product provider. For investment products, this is usually included within a key features document that is required to be provided to the customer.

Adviser Charging

These are the charges made by advisers in relation to personal recommendations on retail investment products. They can consist of an initial adviser charge and an ongoing adviser charge. An initial adviser charge is generally between 1% and 5%. An ongoing adviser charge will be in the region of 0.5% to 2.0%. To charge an ongoing adviser charge, the adviser must provide a service, and both the charge and the service must be cancellable unconditionally. The client can either pay the adviser charge directly or can request that it is deducted from their investment. VAT may be payable on adviser charges depending on the service provided. Regardless of how the adviser charge is calculated, the client must be told the charge in advance in monetary terms (eg, pounds and pence). If the amount cannot be ascertained prior to the transaction, then a reasonable estimate must be given, and the actual amount confirmed once it is known. The cost of the advice is fully transparent.

Historically, the advice provided by a financial adviser was paid through the receipt of either an upfront commission and/or commission paid from the product during its lifespan. Often, the latter type was built into investment products and was a percentage of the value of the fund.

Today, examples of the types of fees that may be charged are usually provided to the investor at the outset. Hourly rates may be charged, or one-off fees for certain types of work (eg, the arrangement of an investment through a personal pension plan). All work and costs should be agreed in advance and no further fees should be charged without prior agreement with the client.

Additional fees may be levied against the value of any funds under the advice or management of the firm and should be disclosed and agreed prior to engagement.

Under this heading, in the UK, the FCA provided guidance on financial adviser charges that conform to the 'adviser charging and remuneration' rules. The requirement applies to retail advisers (eg, IFAs), wealth managers, restricted advisers, private bankers, and stockbrokers. Non-advised services (when no advice or recommendation is given) also fall outside the adviser charging regime.

The requirements were specifically aimed at addressing the potential for adviser remuneration to change consumer outcomes. In summary, those requirements are as follows:

- advisers can set their own charges for their services, since they will no longer be able to receive commission set by product providers
- advisers should have charging structures based on the level of service they provide, rather than on the particular provider or product they recommend
- advisers should disclose those charges to consumers up front, using some form of price list or tariff (confirming the specific amount to be paid later on), and
- ongoing charges should only be levied when an ongoing service has been agreed with the client (except for charges for advice on regular contribution products), and product providers will be banned from offering commission to advisers and will also face other requirements if they offer to deduct adviser charges from their product.

Adviser Charges and Consumer Duty

Consumer Duty aims to enhance the level of care and protection that financial services firms provide to consumers. While Consumer Duty primarily focuses on the relationship between firms and their clients, it indirectly impacts adviser charging practices. For example, Consumer Duty emphasises the need for transparency in financial products and services, which means that advisers need to clearly communicate the nature of the services provided to clients, the associated costs, and any potential conflicts of interest.

Consumer Duty also promotes the principle of fairness in the financial services sector, whereby fees should be reasonable and reflect the value of the services provided. Additionally, advisers are being encouraged to deliver value for money to their clients, so they must be able to justify the fees they charge.

All in all, this helps consumers to make informed decisions about engaging the services of the adviser/firm, and understanding the costs involved.

Service

The type of service provided may also differ in each scenario. If fees are charged, then it is likely that some form of service agreement will be entered into in which the person providing the advice agrees to deliver a structured service with frequent reviews. In the commission example, this is less likely to be the case, as the adviser is only remunerated when a product is sold.

Nature and Frequency of Service to be Provided

The type

When a firm or adviser agrees to provide investment services to a client, the firm/adviser must clearly define and communicate the nature of the service being offered. This includes whether the service is discretionary or non-discretionary (see chapter 1, section 3.6.3).

The frequency of service will vary depending on the nature of the agreement and client needs, but usually involves:

- Regular reviews of the portfolio (eg, quarterly, six-monthly or annually) to assess performance and suitability.
- Ongoing communication to inform the client of any market developments, changes in risk profile or opportunities.
- Ad hoc services on request, such as specific investment advice or portfolio adjustments.

A service agreement or client agreement should outline these details clearly, including how often the client will be contacted, the level of discretion that the adviser holds and what services are included. This transparency allows clients to make informed decisions about the services they receive and ensures that their expectations are managed.

1.10 Monitoring and Review

Learning Objective

7.2.1 Analyse the main factors, resources and limitations shaping a client's current and desired financial circumstances: gather appropriate, relevant information about current and projected income, expenditure, debt and savings; state benefits; consider time horizons and the relative balance of growth versus income; agree clear, feasible, prioritised investment objectives

7.4.7 Understand the process of periodic review to meet key criteria: regulatory requirements; appropriate frequency, taking into account client requirements and the chosen investment strategy

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In section 1.2, we considered what information is appropriate and relevant for a financial adviser to gather about a client in order to assess their financial position, and current and future needs.

Notably, though, financial planning is not a one-off process, partly because of the possibility of change. A client's plans can change because:

- the environment changes around them – for example:
  - the tax regime changes (remember that tax allowances are generally reviewed every year)
  - employment status alters, or
  - the stock market performs better, or worse, than anticipated.
- the client's circumstances change, or so do their needs, wants and aspirations – for example, if the client marries or divorces, retires from full-time employment, inherits a sum of money, or has a child. Not only will their financial needs change, but their attitudes towards finance may also alter and they may, for example, become more or less risk averse.

It is important that clients' plans and progress towards objectives are being monitored and reviewed regularly; otherwise, it is impossible to know whether the financial goals are likely to be achieved. Even quite small changes in financial behaviour can, together, have a big cumulative effect on a client's finances.

Periodic reviews can be very helpful in ensuring that the client stays on track. By repeating the planning exercise a year later, say, both adviser and client can see whether they are making progress towards the client's goals, or whether they are drifting off target and need to use a little financial discipline. Advisers must also encourage clients to tell them if there are any changes in their circumstances as soon as possible.

The adviser should agree early on whether ongoing monitoring and review is going to fall within their remit – in many cases, this will be so. If so, the adviser should have advised the customer of how frequently they can expect to see an update of the plan and any new recommendations.

Periodic reviews for clients should include the up-to-date value of the client's investments. Investments should be valued on a basis which has already been agreed with the client (eg, when stocks and shares are involved, the valuation process should be consistent as to whether bid or mid prices are used and what exchange rate is used for any foreign assets).

It will also generally include a statement showing any transactions undertaken over the period (including any charges that have been deducted, and any additions to or withdrawals from the client's portfolio).

If a full periodic review is being carried out, the adviser should re-verify the client's details and establish whether there have been any changes to their circumstances which might require an amendment to the plan. If this is the case, the adviser should check the new information, and then go over the new recommendations with the client to ensure they understand their implications in full, just as at the outset.

1.11 Investment and Speculation

It is important to understand the distinction between investment and speculation. While there are no universally accepted definitions to differentiate between investment and speculation in a precise scientific manner, investment can be differentiated from speculation by the time frame adopted, and the knowledge and level of risk assumed by the investor:

- Investment, as a professional activity, is undertaken to yield desired wealth benefits over a long-time frame. A great deal of resources and knowledge are directed towards understanding the risk factors in each asset class closely and then managing or mitigating unwanted risks from an investment portfolio systematically.
- With speculation, there may be limited knowledge or no knowledge about the risks borne by an investor.
- Investment is generally undertaken over the medium to long term via a diversified portfolio of assets. In contrast, speculation is based on profiting from the short-term price movements of individual securities or assets.

Investment (also wealth or asset) management can be further differentiated by its structured approach to identifying client needs and developing holistic plans that address the complete range of a client's needs.

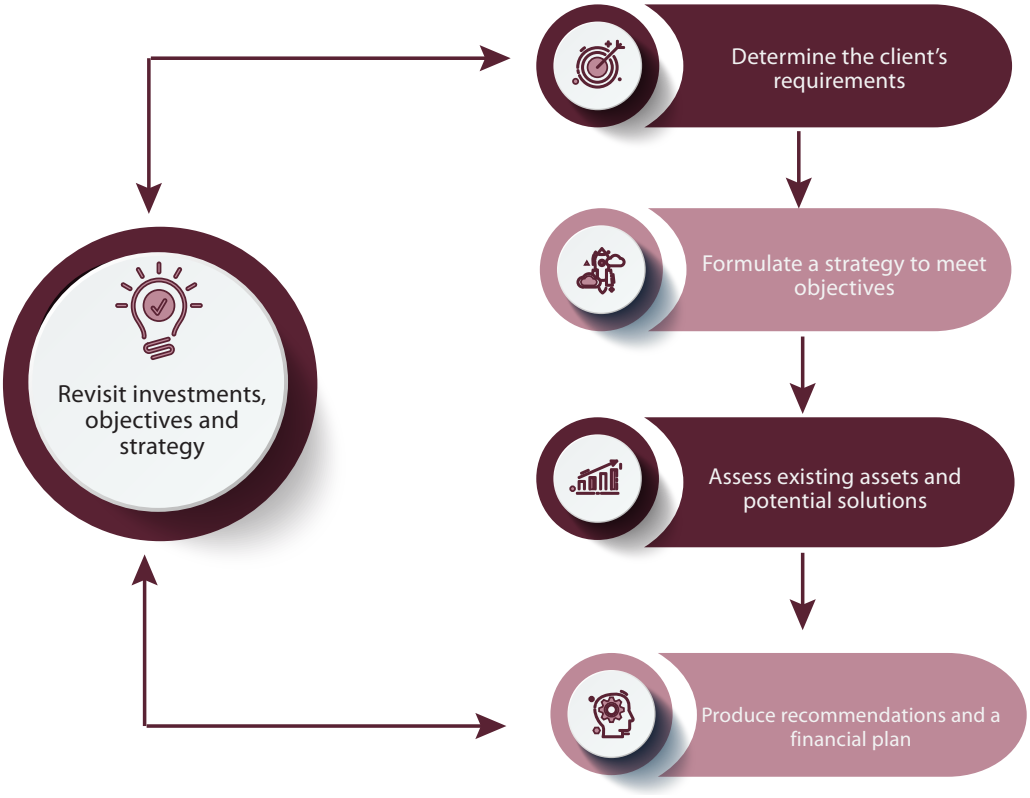
2. The Financial Planning Process

The nature of any relationship with a client will depend upon the service being provided. This can range from providing the facilities to execute transactions without any advice (ie, a one-off service to satisfy a client's needs), to ongoing relationships that deal with in-depth wealth management or private banking (ie, a long-term relationship where the wealth manager is an integral part of the client achieving their investment objectives).

Whatever the service, an adviser has a fiduciary duty to their client that requires them to act in the highest standards and to fully respect the trust and confidence that are part of their relationship.

The main responsibilities of the adviser are to:

- help clients to decide on, and prioritise, objectives
- document the client's investment objectives and risk tolerance
- determine, and agree, on an appropriate investment strategy
- act in the client's best interest
- if agreed, keep the products under review, and
- carry out any necessary administration and accounting.



2.1 Determining Client Requirements

Individuals have varying objectives and expectations. Before advising a client, advisers must be aware of these various needs, preferences, expectations, and the financial situation of the client; the adviser must know their clients before being able to provide appropriate advice.

It is essential to establish the fullest details about the client, as covered in section 1.2.2 of this chapter. This includes relevant information about their current and projected income, expenditure, debt and savings, and investment time horizons. Additionally, this includes the client's aspirations and goals, which the adviser can then translate into a reasonable investment objective, in terms of growth and income, to ensure they find the right balance between the two (to be agreed with the client).

Clients often approach advisers about investment opportunities without considering these factors, and it is important that the adviser establishes this so that they can check the suitability of existing and proposed recommendations and prioritise what needs to be dealt with first.

2.2 Attitude to Risk and Capacity for Loss

Learning Objective

7.3.1 Interpret a profile of a client's risk exposure and appetite for risk, based on the following objective and subjective factors: level of wealth; timescale; commitments; lifecycle; life goals; investment objectives; attitudes and beliefs; experiences; knowledge; capacity for loss; shortfall risk

7.3.2 Apply a client risk profile to the investment selection process

The risk tolerance of a client will have a considerable impact on the financial planning strategy that an adviser recommends. It will exhibit itself in the importance that is given to financial protection and in what is considered an acceptable selection of investment products.

Attitude to risk (ATR) and its definitions are constant themes that financial services companies revisit. The reason for this is simple: they want to be able to categorise a client into a risk category and then be able to say which of their products are suitable for clients with that risk profile.

However, definitions of risk profiles are imprecise and, after reviewing the suggested classification in section 2.2.1, you will understand why trying to turn this into a mathematical exercise is not straightforward. As a result, advisers need to understand even more about suitability and risk and recognise that it is only with the application of skill and knowledge that solutions can be matched with client needs.

2.2.1 Determining a Client's Risk Profile

Objective Factors

As we saw in section 1.2.2, determining a client's ATR needs to be as accurate as possible, as it will drive both priorities and solutions. There are a number of objective factors that can be established that will help define this, including:

- The **timescale** over which a client may be able to invest will determine both what products are suitable and what risk should be adopted.
- **Commitments** are likely to have a significant impact on a client's risk profile (eg, if a client wants/needs to support children through university, this will determine what risk they can assume).
- **Wealth** will undoubtedly be an important influence on the risk that can be assumed. A client with a few assets cannot afford to lose them, while those whose immediate financial priorities are covered may be able to accept greater risk.
- **Lifecycle** is equally important. A client with a longer time horizon until retirement may be prepared to accept a higher level of risk in order to see their funds grow.
- As retirement approaches, this is likely to change as the client seeks to lock in the growth that has been made and, once they retire, they may be looking for investments that provide a secure income on which they can live.
- The **age** of the client will often be used in conjunction with the above factors to determine acceptable levels of risk, as some of the above examples have already shown.

Subjective Factors

Establishing objective factors is certainly a preferable and more accurate way to help define a client's risk tolerance, but subjective factors are also important.

A client's attitudes, beliefs and experiences must also play a large part in the decision-making process. A client may be financially able to invest in higher-risk products and these may suit their needs. However, if they are cautious by nature, they may find the uncertainties of holding volatile investments unsettling, and both the adviser and the client may have to accept that lower-risk investments and returns will have to be selected.

Further, the level of knowledge a client has, based on their previous experiences, may also impact their attitude to risk. The greater the knowledge, the more likely the client is to appreciate the impact that risk may have on future returns. If they do not have any previous experience of holding a particular type of asset, then they may be unwilling to invest due to that unfamiliarity.

Methods of Assessment

From the above, establishing an investor's risk profile is not straightforward. Classifications such as cautious, moderate/balanced and adventurous/aggressive and a detailed understanding of the risks associated with different asset and product types will undoubtedly be beneficial.

Defining risk profiles has limitations, not least trying to help a customer understand the difference and agree on which is applicable. As a result, many financial services companies have different methods of assessment. Some will rely on detailed client/adviser discussions, whereas others produce far more sophisticated versions of the risk classifications, which employ decision trees that require a client to answer a whole series of questions, to determine what products will be suitable. Some companies expand this further, by applying the client's responses to sophisticated financial modelling that aims, based on historic investment performance data, to predict the probability of certain returns, as required by the client, being achieved.

One approach is to have a written questionnaire which the individual is asked to complete. The different possible answers to questions can be scored, so that someone with a more conservative or cautious attitude to risk has a low score, while an adventurous or aggressive risk-taker will show a high score. (It is important to note that regulators worldwide have alerted the industry to be more diligent in their questionnaires to improve the outcome of investment performance.)

The questions asked to assess an individual's risk profile could include the following examples:

- How long do you expect to leave your investment in place until you sell it?
- Which outcome is most important to you from an investment portfolio: preserving asset value/ generating income/long-term growth?
- Which investments have you owned before, or do you now own?
- Which of the following best describes your main objective in investing: the education of your children, your retirement, or leaving money in your will?
- How large is your investment plan in proportion to your total savings?

In whatever way the risk profile is evaluated, what is key is that the adviser understands the client's attitude to risk and the risk characteristics of different assets and products, if the adviser is to match appropriate solutions with the client's needs.

2.2.2 Risk Profiles and Investment Selection

Attitude to risk (ATR) will affect the investment policy that is implemented. If we look at three simple definitions of risk tolerance – cautious/conservative, balanced/moderate and adventurous/aggressive – we can see how these will influence the choice of investments.

Investment Objective	Risk Tolerance	Attitude to Risk and Possible Investments
Income	Cautious	Willing to accept a lower level of income for lower risk Exposure to high-yield bonds and equities will be low
	Balanced	Seeking to balance potential risk with the potential for income growth Exposure to high-yield bonds and equities will be higher
	Adventurous	Willing to adopt more aggressive strategies that offer potential for higher income Exposure to high-yield bonds and equities may be substantial
Income and Growth	Cautious	Seeking maximum growth and income consistent with a relatively modest degree of risk Equities will form a relatively small percentage of the portfolio
	Balanced	Seeking to balance potential risk with the growth of both capital and income Equities will form a significant percentage of the portfolio
	Adventurous	Able to adopt a long-term view that permits the pursuance of a more aggressive strategy Equities will form the principal part of the portfolio
Growth	Cautious	Seeking maximum growth consistent with a relatively modest degree of risk Equities will form a significant percentage of the portfolio
	Balanced	Seeking to balance potential risk with the growth of capital Equities will form the principal part of the portfolio
	Adventurous	Able to adopt a long-term perspective that allows them to pursue a more aggressive strategy Equities may form the entire portfolio

2.2.3 Capacity for Loss (CFL)

Capacity for loss (CFL) is a distinct concept but related to attitude to risk (ATR). While ATR is about how a client feels about investment risk, CFL is about how much risk they can actually afford to take. Therefore, ATR and CFL should be considered and documented separately. Firms should ensure they have a robust process for assessing the risk a customer is willing and able to take.

Importantly, firms must engage clients in a suitability assessment process (including risk profiling) that acts in the best interests of those clients. Detailed questioning is needed to assess the CFL, and this includes, but is not limited to, the following:

- Understanding the client's income and expenditure, both now and in the future.
- Understanding the client's asset profile, both now and in the future.
- Understanding if the client has children/other dependants or plans to have them.

Along with a deep understanding that is needed to assess CFL, it is important to consider the various factors that could affect the client's financial future.

2.2.4 Shortfall Risk

Remember that past performance is not an indicator of future performance. Future returns are not guaranteed, and investments may fall short of initial forecasts. The risk associated with an investor not reaching their intended investment target is referred to as a shortfall risk, where a shortfall is the amount by which the actual investment performance is below the target.

Notably, a shortfall can be temporary (arising out of a unique set of circumstances – eg, market fluctuations, economic downturns or unexpected events) or persistent. If the latter, then it may be necessary to reassess the investment strategy, risk tolerance and/or financial goals, thus prompting adjustments to the investment portfolio in order to mitigate future shortfall risks. Regardless of the nature of the shortfall, it can be of significant concern to investors as it may mean that their financial goals cannot be met.

Shortfalls can usually be corrected using short-term loans, although this may not necessarily be suitable for everyone. Mitigation strategies may include hedging strategies, which aim to offer protection from adverse price movements; and diversification of the investment portfolio to spread risk across different asset classes.

2.3 Developing a Strategy

Learning Objective

7.4.1 Apply a strategy and rationale that will meet the client's objectives: highlight the pertinent issues and priorities; formulate a plan to deal with them; offer proposals to achieve these objectives; explain clearly the relative merits and drawbacks of each proposal and combination thereof; agree a strategy that the client understands and accepts

After establishing what the needs and objectives of the client are, and completing a thorough assessment of their existing financial position, the adviser can assess:

- the affordability and suitability of the client's existing arrangements
- what the client is aiming to achieve, and
- what should be the client's priorities. Remember that financial planning is a long-term process and not a one-off exercise. Most clients will need to prioritise their needs and then deal with the most pressing ones first and the others, when the constraints of affordability allow.

The development of a strategy will involve:

- assessing where action is needed
- prioritising what should be addressed
- identifying where action should be left until a later date, and
- developing potential solutions to address the priorities for further investigation.

2.4 Assessing Existing Assets and Potential Products

Having determined a strategy to meet the client's needs, the next stage is to investigate how the potential solutions can be implemented.

Existing assets and products will need to be checked for suitability. This will involve determining the details of each product, assessing whether they meet the client's needs, and establishing any issues that may arise in moving these to alternative options. There are many factors to consider, and these will be driven by the type of asset, product or arrangement.

Some items to consider include:

- their relevance to the true needs of the client
- whether they are affordable options
- the degree of risk associated with the product considered against the client's risk tolerance
- the extent of any diversification (or lack thereof)
- the liquidity (that is, the ease of selling it or otherwise converting it into cash)
- the level of charges compared to comparable products
- whether it is income-producing or more suitable for capital growth
- the tax treatment/efficiency
- performance of investments, growth achieved and any taxation treatment on encashment
- how long any assets need to be retained to earn any bonuses, and
- any encashment penalties.

This analysis will then provide the basis for continuing the financial planning process. It will identify which assets should be retained and which should be disposed of to finance meeting the client's objectives. The next steps are to identify suitable financial products that can meet the client's requirements and evaluate their features.

For life assurance and protection products, the process is essentially the same in that it involves identifying the range of potentially suitable products, assessing the key product features against the client's needs, and selecting the most suitable option.

2.5 Producing Recommendations and a Financial Plan

So far, we have determined the needs of the client, developed a strategy to meet their needs and identified which assets should be retained and which liquidated to finance the solutions that we have identified as meeting their needs.

The final stage of the process is, therefore, to produce recommendations and a financial plan for presentation to the client. The plan should detail the following:

- Document the client's existing position.
- Identify the areas that require addressing and what the priorities are.
- Detail the recommendations made and the reasons why they are suitable/appropriate.
- Document the areas where action has been deferred until a later date.

2.6 Monitoring and Reviewing Clients' Circumstances

It may be stating the obvious, but after the adviser and client have spent considerable time and effort establishing needs, objectives and plans, why would they not check them from time to time to make sure they are still relevant and still meeting their planned objectives?

Whether they do so will depend on whether the advice has been part of an ongoing service or a one-off exercise. If it is part of an ongoing proposition, ongoing management of the assets and regular reviews of the client's objectives and strategy will be integral to the service proposition. If it is a one-off transaction, the client should be persuaded through the advantage of regular reviews.

There are often too many issues that arise from the results of the financial planning exercise to be dealt with at one time. There are many reasons why this may be so – for example, affordability or just what the client is prepared to address at one time.

The adviser may have recommended a range of investments and, as economic or market circumstances change, a point will arise where profits need to be taken, or investments switched. Equally, a client's circumstances will change, as few things in life stay still. Further regular meetings to review the client's circumstances are clearly a sensible and practical thing to do, but one that sometimes gets lost in the busy lives that clients and advisers lead.

It is also something that is often forgotten by financial services organisations, which sometimes devote more effort to generating new business than servicing existing business.

Sometimes, it takes a detailed financial analysis of their performance for them to remember that looking after their existing client base is usually far more profitable than chasing new business.

It is the practice among the better financial advisers to meet regularly with their clients. This is not simple altruism. Experience has shown that a financial adviser with a small client base can earn a very acceptable income from repeat business by ensuring they are always focused on making sure that their objectives are the same as the clients. Best practice, therefore, dictates that an adviser agrees the frequency with which they will meet to further review the client's position.

2.7 Suitability, Appropriateness and Affordability

Learning Objective

7.3.4 Assess affordability and suitability based on a range of factors including product provider quality, performance, risk, charges and client service

The FCA's COBS 9.2 rules set out the requirements for how firms must assess suitability when giving personal recommendations or managing investments for clients. Under these rules, firms must ensure that any recommendations they make are suitable for the client's circumstances, objectives and needs. To do this, a firm must follow the regulatory 'know your client' (KYC) principle, by gathering information about the client including:

- their knowledge and experience of the investment or service that will be recommended, and
- the level of investment risk they can bear financially and whether that is consistent with their investment objectives.

Clients expect that their advisers will give them appropriate professional advice to help them achieve a sensible financial plan for their current situations, and a roadmap to achieving many of their objectives and aspirations.

They do not benefit from an adviser who simply tells them what they want to hear – for example, that their aims are achievable if, in fact, they are not. Nor will they benefit from advice which benefits the adviser more than the customer, when there are perhaps better, more cost-effective solutions available.

Advisers are under strict obligations to ensure that they have given their client suitable advice in light of their stated needs. To give some examples:

- The rules on this are contained in the FCA's Handbook of regulatory rules, called the Conduct of Business Sourcebook (COBS). The FCA's FTOC initiative, and Consumer Duty have helped to focus advisers' and product providers' attention more closely on the issue of suitability – see section 1.6.
- In the US, investments must meet suitability requirements outlined in the Financial Industry Regulatory Authority (FINRA) Rule 2111 before a firm recommends them to their client.
- In Hong Kong, the Suitability Requirement (which is the cornerstone of investor protection and is integral to selling practices) is set out in Paragraph 5.2 of the Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission.

Advisers should be able to demonstrate compliance with the rules through the paperwork they complete – for example, an assessment of the client's situation and needs, and the chosen selection of the recommended solutions. Again, regulations contain rules on record keeping, and for how long suitability reports should be kept.

2.7.1 Principles for Businesses

The FCA's Principles for Businesses (PRIN) are 12 high level principles that apply to all FCA-regulated firms, and which underpin the FCA's approach to the regulation of firms. The Principles are as follows:

1. **Integrity**	A firm must conduct its business with integrity.
2. **Skill, care and due diligence**	A firm must conduct its business with due skill, care and due-diligence.
3. **Management and control**	A firm must take reasonable care to organise and control its affairs in a responsible and effective manner, with adequate risk management systems in place.
4. **Financial prudence**	A firm must maintain adequate financial resources.
5. **Market conduct**	A firm must observe proper standards of market conduct.
6. **Customers' interests**	A firm must pay due regard to the interests of its customers and treat them fairly.
7. **Communications with clients**	A firm must pay due regard to the information needs of its clients and communicate information to them in a way which is clear, fair and not misleading.
8. **Conflicts of interest**	A firm must manage conflicts of interest fairly, both between itself and its customers and between a customer and another client.
9. **Customers: relationships of trust**	A firm must take reasonable care to ensure the suitability of its advice and discretionary decisions for any customer entitled to rely upon its judgement.
10. **Clients' assets**	A firm must arrange adequate protection for clients' assets when it is responsible for them.
11. **Relations with regulators**	A firm must interact with its regulators in an open and co-operative way and must disclose to the FCA appropriately, anything relating to the firm of which that regulator would reasonably expect notice.
12. **Consumer Duty**	A firm must act to deliver good outcomes for retail clients.

Source: FCA Handbook[1]

1 Financial Conduct Authority, July 2023. PRIN 201 The Principles. Retrieved from https://www.handbook.fca.org.uk/handbook/PRIN/2/1.html (Accessed: March 2025)

Specifically, on suitability, firms are required to have integrity (PRIN 1) and to take reasonable care to ensure the suitability of its advice and discretionary decisions (PRIN 9). To comply with PRIN 1 and PRIN 9, a firm should obtain sufficient information about its private customers to enable it to meet its responsibility to give suitable advice. Similarly, a firm acting as a discretionary investment manager for a private customer should ensure that it has sufficient information to enable it to put suitable investments into the customer's portfolio.

The Consumer Duty introduced PRIN 12. All firms are required to comply with PRIN 12, from 31 July 2023 with respect to new products and services, and from 31 July 2024 with respect to closed products and services. In order to comply, firms must assess and evidence how they are acting to deliver good outcomes for their retail customers throughout the lifecycle of the products and services that they provide.

2.7.2 General Suitability Requirements

Once a clear picture of the customer's requirements and needs is established, the steps expected of the firm to ensure its recommendations are suitable and appropriate will vary depending upon the needs and priorities of the customer, the types of investment or service being offered, and the nature of the relationship between the firm and the private customer.

When a firm proposes to offer investment advisory or discretionary services, it must first assess whether such services are suitable for a retail or professional client. If the firm intends to offer other investment services, it must ensure they are suitable/appropriate for the client.

The firm should ascertain:

- the client's knowledge and experience of the types of services and transactions
- the nature, volume, frequency and time that the client has been involved in such services and transactions, and
- the client's level of education, profession or relevant former profession.

The general requirement is that the firm must take reasonable steps to ensure it makes no personal recommendation to a customer, unless it is suitable for that customer. Suitability will take into account the facts disclosed by the customer and other facts of which the firm should reasonably be aware.

Having assessed what services and products are suitable, the firm should provide the client with a report that should set out, among other things, why the firm has concluded that a recommended transaction (or why taking no investment decisions/or other action) is suitable for that client.

If the firm determines after an assessment that the service or product is not suitable for the client, then it should issue a risk warning to the client. If the client still wishes to proceed despite the warning, then it is up to the firm to decide whether it will do so.

If the firm is acting as an investment manager for a private customer, there is an ongoing requirement that it must ensure that the investment portfolio remains suitable. Equally, if a customer has agreed to the firm pooling their funds with those of others, the firm must take reasonable steps to ensure that any advisory or discretionary decisions are suitable for the stated objectives of the fund (see section 1.8 on monitoring and review).

2.7.3 Suitability of Investment Opportunities

Although a comprehensive and detailed formula cannot be delivered for every client, there are a series of steps that an adviser takes. These steps are based on the objectives in terms of risk and return that have been agreed with the client, after taking into account their liquidity, constraints, and other needs.

As we saw in section 3 of chapter 3, financial theory has established a linear relationship between risk and return. More simply, as the level of risk taken in an investment increases, the return has to increase to compensate investors for the additional risk taken. The risk premium required is proportional to the level of risk taken.

Traditionally, we can visualise the risk axis being split into zones and defined by the three major asset classes (cash, bonds and equities); and risk increases from cash through to equities. Alternative investments are contemporary vehicles and strategies that have increased the risk space further and bring diversification opportunities within a portfolio.

The adviser has a duty to ensure that the client's portfolio is invested in accordance with the investment policy statement (IPS). The client information that will be used to build-up an IPS are:

- **Objectives** – return requirements and risk tolerance.
- **Constraints** – liquidity, time-horizon, regulations, taxes and unique needs.

After an assessment of the client's needs, the policies will focus mainly on:

- Active or passive management.
- Asset allocation – proportions of the mix in terms of asset classes and their composition.
- Risk positioning.
- Tax positioning.
- Capital growth and/or income generation.
- Responsible, sustainable and ethical considerations.

An example of a matrix of objectives for a variety of investors is as follows.

Type of Investor	Return Requirement	Risk Tolerance
Individual and personal trusts	Lifecycle (eg, education needs, children, retirement)	Lifecycle dependent (eg, older individuals are generally more risk averse)
Mutual funds	Variable	Variable
Pension funds	Assumed actuarial rate	Depends on the proximity of pay-outs
Endowment funds	Determined by current income needs and the need for asset growth to maintain the real value	Generally conservative

Type of Investor	Return Requirement	Risk Tolerance
Life insurance company	Should exceed the new money rate by a sufficient margin to meet expenses and profit objectives; also, actuarial rates are important	Conservative
Non-life insurance companies	No minimum	Conservative
Banks	Interest rate spread	Variable

Example

Thomas and Simone are married, both are in their early 60s, and they have just finished mortgage payments on their house in which they have lived for the last 15 years. Their two children have both completed their university education, gained employment and moved out of the family home. Thomas and Simone are, therefore, now planning for retirement.

What advice on investing their retirement savings would you give? If they are very risk-averse, what would you advise?

This is an open-ended question, and you need to be careful in providing advice until you have thoroughly understood the client's needs and current position. Follow the steps outlined in section 1.2.2 before drafting an IPS.

At a general level, check their eligibility with regard to tax allowances and tax-efficient schemes (eg, ISAs); and, from this, that they have both used up their allowances and invested in those schemes. On the other hand, a risk-tolerant investor will prefer investment growth and will not be averse to losing capital in the short term, in return for the potential of higher long-term returns. In this case, given their risk aversion, the asset allocation will likely tilt towards bond-like investments, prioritising income and capital protection over the long term.

2.7.4 Appropriateness of Investment Opportunities

The FCA's appropriateness rules are set out in COBS 10.2 and apply when a firm provides non-advised investment services (ie, when no personal recommendation is being made). In contrast to the suitability rules, firms must carry out appropriateness checks when clients access services without advice (ie, execution-only trades). These checks are also typically required where firms arrange deals in derivatives or other complex instruments.

Appropriateness requires firms to ask the client for information about their knowledge and experience in the investment field of the specific type of product or service offered or demanded, so that they can assess whether that product or service is appropriate.

In assessing the customer's knowledge and experience, the firm should gather information on:

- the **types of services and transactions** which the customer is familiar with
- the **nature, volume, frequency, and time** that the customer has been involved in such services and transactions, and
- the customer's level of education, profession or relevant former profession.

Additionally, some firms have a potential vulnerable customer (PVC) policy to ensure that no advice is given to particularly vulnerable people without proper safeguards (see section 1.2.3).

2.7.5 Affordability of Investment Opportunities

Simply because a need has been established does not mean that it can be addressed. Affordability will be a major constraint on a client's ability to protect against all the risks that might arise. There is little point in recommending a regular savings product, if the investor is unlikely to be able to keep up the payments, for example.

The adviser will therefore need to guide the client through a planning and prioritisation process. This will involve:

- listing the areas that need to be addressed
- quantifying the impact and likelihood of each
- ranking them in order of importance
- reviewing existing arrangements
- assessing the cost of providing protection
- identifying the extent and scope of protection that the client can afford, and
- establishing a plan which will allow some of the needs to be addressed.

Prioritising such decisions is not an easy process, especially as the client (having recognised the need) may want to deal with all of them. The adviser, therefore, has a key role in explaining the process to the client. They need to manage the natural concerns that this will generate and explain that, although a risk has been identified and needs to be addressed, the client also needs to take into account the likelihood of it occurring.

The age of the client may also give some indication as to what to prioritise. For example, a client in their 20s and 30s should be considering life, sickness and redundancy cover as a high priority; while redundancy cover is not usually applicable for a client in their 60s or older.

The adviser also needs to explain the long-term nature of this process, namely that the prioritisation exercise can only identify the immediate priorities that should, and can, be addressed. The remainder still needs to be addressed at some stage when the client's circumstances allow (ie, they have been deferred and not abandoned).

The process of prioritisation will enable a plan to be established of what needs doing and what will be considered later. This leads naturally to the realisation that financial planning is an ongoing exercise and that the client and adviser will need to regularly review progress and reassess the plan in the light of changes to needs, circumstances and priorities.

2.8 Product Providers

An adviser can assess the suitability of a product provider based on several factors, including quality, performance, risk, charges, and client service, as follows:

- **Quality** – assessing the provider's reputation, track record, and financial stability. The adviser can review the company's history, its standing in the industry, and any ratings or reviews available from reputable sources. It is important to choose a product provider that has a solid reputation for delivering quality products and services.
- **Performance** – analysing the historical performance of the products offered by the provider. The adviser can review the investment returns of the products over different time periods and compare them to relevant benchmarks and peer groups. Crucially, the adviser must assess both short- and long-term performance to determine if the provider has a consistent track record of delivering competitive returns.
- **Risk** – assessing the risk associated with the products offered by the provider. The adviser should review the investment strategies, asset allocation and risk management practices employed by the provider; and analyse the historical volatility and downside risk of the products in order to understand how those products may perform during different market conditions. A thorough assessment of risk is essential to ensure that the products align with the client's risk tolerance.
- **Charges** – evaluating the charges and fees associated with the products offered by the provider. This includes assessing management fees, administrative costs, transaction costs, and any other expenses borne by the investor. Comparing the charges with industry standards will help to establish the value provided by the product in relation to its cost.
- **Client Service** – assessing the level of client service and support provided by the product provider. This includes evaluating the responsiveness, accessibility, and professionalism of the provider's customer service team. The adviser can also consider feedback from existing clients to gauge the provider's commitment to client satisfaction. Strong client service is crucial for addressing investor inquiries, handling administrative tasks, and ensuring a positive overall experience for clients.

Through thorough assessments, advisers can make informed recommendations that align with the needs and preferences of their clients. It is important for advisers to conduct due diligence and stay updated on changes in the provider's offerings and services to ensure ongoing suitability.

3. Environmental, Social and Governance (ESG) and Socially Responsible Investment (SRI) Strategies

Learning Objective

7.3.5 Understand environmental and social governance, and socially responsible investment strategies, their purpose and the circumstances in which it may be appropriate to discuss them

Organisations and individual investors may wish to make investment decisions that take into account their ethical/moral beliefs or social values. Churches and charities that have funds to invest in stock markets may want to avoid buying shares or bonds issued by companies involved in certain activities (eg, the manufacture or sale of alcohol products or the provision of gambling facilities).

In some cases, investors must avoid certain areas, perhaps because it is written into its constitution that it must do so. This might be the case for a charitable trust set up by a wealthy benefactor, for example, who wanted their values and wishes reflected in the charity's trust deed.

3.1 Responsible, Sustainable and Ethical Considerations

Some individual investors also want their money to be put to good use. This means not just achieving a market return, but also benefiting society (or, at least, not doing significant harm, a sentiment known as *'doing well while doing good'*). As such, they may want to avoid having investments in their portfolios that fund businesses of which they do not approve, such as animal testing and nuclear power (**negative screening**); or to support firms providing positive solutions to global challenges, such as climate change and social justice (**positive screening**). That said, there will be different views about what products or services should be regarded as 'good' or 'bad'.

These negative and positive screening processes can be applied in different ways, either on their own or blended together, to create different investment approaches, such as those discussed below.

Environmental, Social & Governance (ESG)

Environmental, Social & Governance (ESG) involves three key dimensions of responsible and sustainable investing: environmental, social and corporate governance. See section 2.2.6 of chapter 3 for more information on ESG.

Socially Responsible Investing (SRI)

SRI is broadly similar to ESG, except that SRI is driven first by investors' individual values rather than investment potential. Today, one of the most important issues for SRI (among other forms of responsible, sustainable, and ethical investment) is shareholder engagement, whereby shareholders (as partial owners of a business) may enter into dialogue with management to encourage behavioural change and address serious social issues, as an alternative to the formal vote on a shareholder resolution.

Ethical Investing

Ethical investing is the practice of selecting investments based on ethical or moral principles. This involves filtering out unethical companies involved in the 'sin stocks' (ie, industries that profit from human weaknesses and vices, namely in alcohol, tobacco, gambling, adult entertainment and weapons manufacture). At the same time, it may involve supporting ethical companies that make a positive contribution through their products and services.

Some investors refer to a broader category called the 'sextet of sin', which includes the sin stocks and nuclear power. The list of companies that conflict with ethical investing has expanded over the years to include industries such as high-interest-rate lending (due to their predatory nature) and industries with significant environmental harm, such as fossil fuels and deforestation.

Impact investing

This involves investing in companies to generate a positive environmental or social impact with explicit measurable impact goals. This is not to say that impact investors will not expect a decent financial return, but they are prepared to consider the positive or beneficial impact of their investment as part of their overall 'return'.

There are two types of impact investment:

- 'Impact first', which provides loans at below-market rates to community groups, charities and other organisations to achieve a high social impact alongside a financial return.
- 'Return first' (or 'finance first'), which actively emphasises the need for the companies invested in to have an actively positive or beneficial impact.

Philanthropy

Philosophically, philanthropy is a form of investing that lies at an extreme beyond impact investing, as philanthropists expect to see no financial return from their 'investment' or donation (or, should they decide to give away their wealth, to even receive back their initial stake). It is important for advisers to understand donors' key motivations for supporting their chosen causes and match donations with those causes to maximise the impact of donations.

An important part of philanthropy is matching donors with causes that they wish to support the most. It is therefore important to spend time with the donor and discuss their key motivations for supporting their chosen causes to maximise the impact of their donations. For donors, assessing the impact of their donation can help them to see how well their funding has been used and, therefore, whether they should continue to fund that cause.

3.2 Current Investment Levels

The concept of investing in line with responsible, sustainable and ethical principles has gained traction on a global scale in recent years. According to Morningstar's Global Sustainable Fund Flows Report[2], global assets in sustainable open-ended funds (including ETFs) reached US$3.2 trillion at the end of 2024.

While this was slightly below the record high of $3.3 trillion at the end of Q3 2024, this retreat in assets under management (AUM) was due to market price depreciation; notably, investor demand remained strong, with sustainable open-ended funds recording their highest quarterly inflows of US$16 billion (up from US$9.2 billion in the previous quarter). However, in early 2025, ESG funds experienced notable outflows amid rising political pressures and shifting investor sentiment, marking a reversal in the trend[3].

While many companies have used this growing demand as an opportunity to improve their environmental and social performance, others have been accused of attempting to capitalise on this demand by simply rebranding themselves. This so-called 'washing' (eg, 'greenwashing') is becoming increasingly common and more sophisticated as more companies jump on the 'sustainable' bandwagon.

2 Morningstar, 2025. Global Sustainable Fund Flows: Q4 2024 in Review. Retrieved from https://www.morningstar.com/lp/global-esg-flows (Accessed: March 2025)

3 Morningstar, 2025. Global Sustainable Fund Flows: Q1 2025 in Review. Retrieved from https://www.morningstar.com/business/insights/research/global-esg-flows (Accessed: June 2025)

At the same time, some firms under-report their sustainability efforts to avoid scrutiny (greenhushing), while others attempt to suppress bad news surrounding an environmental problem to make it appear less serious than it is (greenshifting), or hide within industry groups that move at the pact of the slowest adopters (greencrowding). Hence, it is important for investors to satisfy themselves that a company is as 'good' as it says it is (eg, by analysing its alignment with global/national targets on climate change). The ways in which investors can assess companies/funds is covered in chapter 6, section 3.2.

In response to these concerns, governments worldwide have imposed various regulations aimed at protecting consumers against false claims in recent years and months. For example:

The EU
Introduced in 2019, the Sustainability Finance Disclosure Regulation (SFDR) requires financial services professionals to provide prescript and standardised disclosures on how they integrate ESG factors at the organisation and product level. Any firm not complying must publish a statement to explain why (comply or explain). The European Supervisory Authorities (ESAs) have proposed significant amendments to the SFDR to enhance clarity and reduce complexity; key changes include adding more social and environmental indicators, adding disclosure requirements for decarbonisation targets, and simplifying the presentation of sustainability disclosures.

The UK
The Sustainability Disclosure Requirement (SDR) requires investment products within its scope (ie, those that are marketed to retail investors in the UK, and that use certain sustainability-related terms in their product name and marketing materials) to display a label reflecting their sustainability characteristics. If a product does not meet the qualifying criteria, then it will not be able to use these labels, nor use one of these terms in its product name or marketing materials. Investment products may voluntarily apply one of the four labels, provided that they reflect their sustainability characteristics.

Where any product misuses a label, makes misleading disclosures and/or ignores the requirement to make the necessary disclosures, then the FCA has the authority to take enforcement action, including financial penalties and sanctions.

The SDR also introduced an anti-greenwashing rule, effective from 31 May 2024, which requires all regulated firms to ensure that their sustainability-related claims in all marketing materials and communications are clear, fair and not misleading.

The US
In 2020, the Federal Trade Commission (FTC) updated its Environmental Marketing Guides (also called the Green Guides) to address misleading environmental claims, such as 'eco-friendly', and the use of third-party certifications without clear terms of qualification.

However, under the Trump administration, the US Securities and Exchange Commission (SEC) has paused its climate disclosure rule, which would have required public companies to report greenhouse gas emissions and climate-related risks. This move reflects a shift towards a deregulatory approach, with a focus on investor protection rather than environmental reporting.

Responsible, sustainable and ethical investment is a rapidly evolving area that is attracting the attention of investors, policymakers and regulators around the world. New approaches continue to be developed to address identified challenges.

3.2.1 Restrictions on Portfolio Construction and Implications for Performance

Depending on the investor's values and expectations, different restrictions may need to be applied to a portfolio constructed to meet responsible, sustainable or ethical standards. For example, as already explained:

- one investor might just want to avoid areas they saw as harmful, or
- another might want to be more proactive and invest in a way that supports activities that are positively helpful to the environment.

Further, investors have different areas of interest. One person might be more interested in helping people in poorer countries, for example; while another might be more interested in projects closer to home, or supportive of animal welfare instead of that of people; or perhaps more focused on environmental issues, rather than social ones.

It is also important that investors ensure their wishes are reflected in the portfolio's restrictions and limits so that the manager knows what is expected. If they are investing in a packaged product (such as a unit trust, OEIC or life product), then this will not be tailored to their needs. They should read the product literature carefully to ensure that they understand the limits within which the product will be invested, and that these reflect their concerns.

Responsible, sustainable and ethical funds generally state explicitly the criteria they use in selecting investments so that investors can decide if a particular fund meets their needs. In the process of screening the companies they invest in, such funds may use either, or a combination of, negative and/or positive screening.

Once it has been established whether a company meets the criteria of the fund, investment managers can decide whether the company is worth investing in at the current price based on other, more traditional, investment criteria such as fundamental analysis (see chapter 6, section 3.2).

Even for portfolios in directly held company shares, it is important to remember there is no such thing as a perfect company. All are involved in activities that someone, somewhere, will object to, and none go far enough in terms of positive environmental and social contribution to satisfy everyone, all the time.

Investors should remember that the more restrictions they place on a portfolio, the more likely they are to limit its potential for good, short-term performance. This is simply because there are fewer options for its manager to select from.

In addition, by placing restrictive criteria on it, they may inadvertently be increasing the risk within the portfolio – because its investments may be less diversified than would otherwise be the case, and/or because there is a concentration of investment in areas with a strong correlation to one another; eg, renewable energy or healthcare, at the sector level.

That said, debates revolve around whether incorporating ESG factors into the investment process will help or hinder overall returns. Those in favour of responsible, sustainable and ethical policies sometimes argue that the performance of individual companies selected on these grounds tends, over the long term, to be better than that of some other companies. This is, in part, because they tend to have strong internal governance criteria, which feeds through into better overall management controls (assuming the companies that individuals choose to support are following the environmental and societal claims they are making). However, critics argue that the additional restrictions placed on a company complying with responsible, sustainable ethical criteria can only limit its abilities to make decisions in the (financial) best interests of its shareholders, so performance must be lower.

Over the longer term, evidence suggests that businesses identifying and harnessing selected responsible, sustainable or ethical issues can substantially improve their economic impact, so long as those issues are relevant to that business (although the results vary depending on factors including geography, market capitalisation and industry sector, among others)[4].

3.2.2 Corporate Social Responsibility (CSR)

Also known as environmental social governance, corporate responsibility, corporate citizenship, responsible business and corporate social opportunity, corporate social responsibility (CSR) is a form of corporate self-regulation integrated into a business model.

Ideally, CSR policy functions as a built-in, self-regulating mechanism whereby businesses monitor and ensure their adherence to law, ethical standards, and international norms. Businesses embrace responsibility for the impact of their activities on the environment, consumers, employees, communities, stakeholders and all other members of the public sphere.

Furthermore, such businesses proactively promote the public interest by encouraging community growth and development, and voluntarily eliminating practices that harm the public sphere, regardless of legality. Essentially, CSR is the deliberate inclusion of public interest into corporate decision-making, and the honouring of a triple bottom line of 'economic, environmental, and social', also known as 'people, planet, profit'.

The practice of CSR is subject to much debate and criticism. Proponents argue that there is a strong business case for CSR, in that corporations benefit in multiple ways by operating with a perspective broader and longer than their own immediate, short-term profits. However, critics argue that CSR distracts from the fundamental economic role of businesses, that it is nothing more than superficial window-dressing or that it is an attempt to pre-empt the role of governments as a watchdog over powerful multinational corporations.

Further, investors may believe that implementing CSR policies is expensive and complicated, so could decrease shareholder wealth; however, this is not necessarily the case. It can include simple measures such as reduced paper usage and switching to energy-efficient lighting. Another example is supporting local charities or community initiatives – this can lead to businesses building strong relationships within their communities and contributing to local environmental and social causes.

3 Principles for Responsible Investment, June 2021. ESG factors and equity returns – a review of recent industry research. Retrieved from https://www.unpri.org/pri-blog/esg-factors-and-equity-returns-a-review-of-recent-industry-research/7867.article (Accessed: March 2025)

3.3 Investing in Accordance with Faith Values

Learning Objective

7.3.6 Understand the main considerations for investing in accordance with faith values, including Shariah law

As we have already seen ethical investing was founded on religious roots.

Almost every religious denomination in the world has views and opinions which may impact how they wish to invest, so they may favour certain causes, while at the same time, avoiding those that contradict their values. When it comes to religious-based rules, there are a wide variety of interpretations based on their teachings.

There are many more belief systems than it would be possible to cover within this text, and those which we have covered can vary significantly between regions, denominations and individuals. In many cases, political and societal factors will have a huge impact on shaping the key values for an individual; therefore, candidates are encouraged to carry out their own additional research should they wish to find out further information concerning specific belief systems.

Ultimately, clients' religious views may not compromise the legal imperatives that ensure diversity and protect against discrimination of protected classes of people, unless there is a specific exception in law.

Islam sets out specific requirements in Islamic law (Shariah) with regard to investment. To support their communities who follow these practices, a number of Islamic banks have become established worldwide while, at the same time, conventional banks now provide a wider range of products and services that comply with these laws. Islamic banking refers to a system of banking or banking activity that is consistent with the principles of Shariah law and its practical application through the development of Islamic economics.

Shariah prohibits the payment of fees for the renting of money (*riba*, or usury) for specific terms, as well as investing in businesses that provide goods or services considered contrary to its principles (*haram* or forbidden). The overarching principle of Islamic finance is that all forms of interest are forbidden. The Islamic financial model works on the basis of risk sharing. The customer and the bank share the risk of any investment on agreed terms and divide any profits between them. The main categories within Islamic finance are:

- ***Ijara*** – a leasing agreement whereby the bank buys an item for a customer and then leases it back over a specific period.
- ***Ijara-wa-Iqtina*** – a similar arrangement, except that the customer is able to buy the item at the end of the contract.
- ***Mudaraba*** – offers specialist investment by a financial expert in which the bank and the customer share any profits. Customers risk losing their money if the investment is unsuccessful, although the bank will not charge a handling fee unless it turns a profit.
- ***Murabaha*** – a form of credit that enables customers to make a purchase without having to take out an interest-bearing loan. The bank buys an item and then sells it to the customer on a deferred basis.
- ***Musharaka*** – an investment partnership in which profit-sharing terms are agreed in advance, and losses are pegged to the amount invested.

3.4 Investment for Charities

Learning Objective

7.3.7 Understand the main considerations that should be taken into account when investing for charities

Many charities have surplus funds not needed to fund their immediate charitable activities. Often, the trustees invest some or all of this surplus in order to generate extra income to fund future activities. The basic principle governing trustees' decisions about investing their charity's funds is that they must take a prudent approach.

When investing charitable funds (especially those which represent permanent endowment), trustees must seek to strike the right balance between the two objectives of:

- providing an income to help the charity carry out its purposes effectively in the short term, and
- maintaining (and, if possible, enhancing) the value of the invested funds to enable the charity to carry out its purposes in the longer term effectively.

In order to discharge the duty to adopt a prudent approach to the investment of the charity's funds, trustees must:

- know their investment powers
- discharge their duties properly when they take decisions about investments
- have proper arrangements in place for holding investments on behalf of the charity
- follow certain legal requirements if they are going to use an institution to manage the charity's investments on their behalf, and
- know what they can and cannot do if they are going to apply an ethical approach to the charity's investments.

If the size of the funds to be invested justifies it, trustees should decide on a formal investment policy for the charity. This will vary in the level of detail and complexity depending on the size of the charity, and on whether the function of investment has been delegated.

3.4.1 Definition of an Investment

Conceptions of what constitutes investment vary. In this context, it needs to be distinguished from other forms of income generation, such as trading and gambling. For most trustees, particularly of smaller charities, the examples of what are, and what are not, investments in the following paragraphs should be sufficient as a guide.

Examples of Investments

The term 'investment' is not defined in statute. Instead, the courts have interpreted the phrase. While not exhaustive, some common examples of investments include:

- shares in companies
- land rented or leased out by the charity to tenants

- interest-bearing loans by the charity (eg, government bonds, company loan stock, deposits at banks and building societies), and
- units/shares in collective investment schemes (eg, unit trusts and OEICs); and, in the UK, common investment funds (CIFs) and charity authorised investment funds (CAIFs).

CIFs and CAIFs are both pooled investment vehicles that have been specifically set up for charities. CIFs were first introduced by section 22 of the Charities Act 1960; and they have benefits relating to tax, the treatment of income and independent oversight (eg, management fees are VAT exempt, resulting in a reduced OCF to all unitholders). However, while CIFs are regulated by the Charity Commission (which registers and regulates charities in England and Wales), they are not regulated by the FCA.

CAIFs are relatively new fund vehicles that share the benefits of CIFs, but unlike CIFs, they are dual-regulated by the Charity Commission and the FCA. Since 2017, when the Charity Commission registered the first CAIF, several CAIFs have been established and existing CIFs have been converted into CAIFs.

Examples of What are not Investments

Some examples of what do not constitute investments are:

- Land purchased and developed with a view to sale. This will usually be regarded as trading rather than investment, and hence may attract only limited tax relief.
- Commodities (eg, gold and vintage wine) that have been acquired with a view to resale in the future at a profit. This is the only prospect of a financial benefit from the transaction. The purchase and sale of such items will also usually be viewed as trading.

3.4.2 Trustees' Powers of Investment

Under the Trustee Act 2000, most trustees will have a very wide power of investment. In practice, this means that most trustees are able to invest in almost anything regarded under trust law as an investment (see section 3.4.1 for examples of what falls within the trust law definition). The Trustee Act 2000 is covered in section 3.5 of this chapter.

There are certain circumstances in which trustees do not have the power of investment which the Trustee Act 2000 confers, or when certain conditions apply when using powers of investment. These general powers of investment are not available if:

- the charity is a charitable company (except when the company is itself acting as a charity trustee), or
- the charity's governing document excludes or restricts the Trustee Act 2000 power (although, in certain circumstances, this statutory power overrides restrictions or exclusions in the governing document). For instance, the governing document may restrict the trustees to investing in certain types of investment (eg, shares traded on the LSE) or prohibit investment in certain industries (eg, armaments or tobacco).

If the Trustee Act 2000 powers are not available, then trustees must rely on any powers within their governing document when making investments.

3.4.3 Trustees' Duties

When managing a charity's investments, trustees must act according to certain standards as defined in the Trustee Act 2000, whether they are using the investment powers in the Act or not. Notably, the trustees of charitable companies have similar obligations, even though the Act does not apply to them expressly.

Additionally, trustees of charities have other specific duties that they must comply with. For example, all trustees must take into account any relevant provisions in their charity's governing document.

Trustees of all charities with permanent endowment have a duty to be even-handed between the interests of present and future beneficiaries of the charity. In practice, this means that they must consider whether an investment provides a suitable balance between providing income for current needs and preserving or increasing the value of the investments, so that the charity can operate effectively in future.

A charity's annual report must include a description of the policies used by the trustees to select the charity's investments. Larger charities must also report on the performance of their investments as part of their compliance with accounting requirements.

3.4.4 Investment Policy

The charity trustees must decide on an investment policy for their charity, record it clearly in writing, and keep it under regular review. If they have delegated their investment function to an investment manager, these are still legal requirements for the trustees. Without an investment policy, trustees are likely to find it difficult to demonstrate that they are making good use of the charity's funds.

As an example, any investment policy should address the following considerations:

- the need for enough resources for the charity to carry out its present and future activities effectively
- the level of acceptable risk and how to manage it, and
- the charity's stance on responsible, sustainable and ethical investment.

Responsible, Sustainable and Ethical Investment

The question of basing an investment policy on responsible, sustainable and ethical considerations can be an important one for charities.

Trustees must strike a balance between the likely cost of lost support (if the charity holds investments that may conflict with their objectives) and any risk of financial underperformance if those investments are excluded from its portfolio.

Trustees need to keep in mind their duty to invest in a way that furthers the purpose of the charity. This will normally be achieved by seeking the maximum return from a set of investments that has been selected prudently. A responsible, sustainable or ethical investment policy can be entirely consistent with this duty, but as discussed in section 3.2.1, there can be a risk that excluding or preferring certain investment classes or particular investments may detract from the objective of obtaining the best direct financial returns from investment.

If the trustees decide to adopt a particular investment policy, they must be clear that their decisions to follow the policy will not place the charity at risk of significant financial detriment – either due to underperformance by the preferred investments, or by the exclusion from consideration of forms of investment to which the trustees are opposed.

Some trustees may wish to adopt a particular policy even though it does (or may) detract from the objective of obtaining the best direct financial return. This may be because investing in certain businesses would conflict with the charity's aims, or would hamper the charity's work – for example, a charity aiming to protect the environment and wildlife may decide not to invest in businesses that pollute what the charity is trying to protect, or where potential beneficiaries would not be willing to receive help because of the source of the charity's money. In doing so, trustees may therefore adopt negative or positive screening criteria, or apply a combination of the two. Trustees are unlikely to be criticised for adopting a particular investment policy if they have considered the correct issues, taken appropriate advice and reached a rational result.

While the Charity Commission's role is not to instruct trustees on how to invest charity assets, it wants to encourage them to invest those assets in a way that is consistent with the charity's purposes and values. In 2020, the Charity Commission identified that one of the main barriers to responsible, sustainable and ethical investment for charities surrounds the legal framework, in that many trustees found it confusing. To address this, the Charity Commission has since provided updated guidance to clarify how trustees can consider responsible, sustainable and ethical factors when making investment decisions.

While there is no prohibition on making investments that conflict with a charity's aims, these judgments provide some clarification to trustees on how they should approach non-financial factors.

Mixed Motive Investments

Charitable investment generally falls into one of two categories:

1. a 'normal' financial investment that seeks to generate the best possible return for an acceptable level of risk, but may conflict with the charity's charitable purposes, and
2. investments that seek to further the charity's objectives but may not deliver a market-rate financial return.

Both are accepted methods of investment as long as they are undertaken for the charity's best interests.

Where a charity's investment cannot be wholly justified as either one of these two categories, it may be possible to justify it as a 'mixed motive' investment – in other words, it does not provide a sufficient investment return, nor does it contribute sufficiently to the charity's purposes. An example is a charity that wishes to invest in a property, in part for the investment returns received, and in part to allow a third party that is contributing to the charity's aims to use the property. Charities must disclose information on any mixed motive investments separately from their other assets.

3.4.5 Tax Implications

In the UK, most investments are treated as qualifying investments by HMRC. However, the making of certain types of investments may be treated as non-qualifying investments. This can lead to a restriction of the charity's tax reliefs. Trustees making such investments must be able to satisfy HMRC that the investments are made for the financial benefit of the charity and not for the avoidance of tax, whether by the charity or by any other person. Guidance on the tax implications of investment by charities can be found at https://www.gov.uk/charities-and-tax.

3.5 Investment for Trusts

Learning Objective

7.3.8 Understand the main considerations that should be taken into account when investing for trusts

We covered the subject of trusts in chapter 4, section 2.

A personal trust is created for a person or persons. Personal trusts can be used by beneficiaries to accomplish a variety of financial objectives; these trusts are separate legal entities that have the authority to buy, sell, hold and manage property for the benefit of their beneficiaries.

The law in the area of personal trusts is complex. In England and Wales, the legislation covering trusts and trustees is contained in the Trustees Act 2000. It has given professional trustees far greater investment freedom, while making them more accountable. In addition, trustees are now required to seek professional guidance and investment advice. Trustees should take legal advice if uncertain.

The Trustee Act 2000 covers five areas of trust law:

- the duty of care imposed upon trustees
- trustees' power of investment
- the power to appoint nominees and agents
- the power to acquire land, and
- the power to receive remuneration for work done as a trustee.

This Act sets a duty of care (both objective and standard), massively extends the trustees' powers of investment, and limits the trustees' liability for the actions of agents, also providing for their remuneration for work done in the course of the trust. The legislation requires that trustees ensure that any adviser they are proposing to use is competent to give advice.

There are three main areas of responsibility that a trustee managing investment trusts should be aware of:

- a statutory duty of care
- general powers of investment, and
- rules on the appointment of nominees, custodians and investment managers.

We will now consider each of these responsibilities in turn.

3.5.1 Statutory Duty of Care

Trustees have a duty of care under the Trustee Act 2000, which is enshrined in statute law. This is the duty for trustees to exercise such skill and care as is reasonable in the circumstances, making allowance for their specialised knowledge, experience or professional status. The Act requires the delivery of a certain standard of consistency and competence expected of trustees. This makes it more difficult to ignore or overlook their overall responsibilities.

The standard of care takes into account the trustees' experience and professional training. For example, in relation to the purchase of stocks and shares, a higher standard may be expected of a trustee who has specialist knowledge in the area of finance (eg, an investment banker, specialising in equities) than of a trustee who is, for example, a beekeeper, particularly if they are acting as a trustee in the course of their business.

According to Section 1 of the Act, the duty of care must be exercised when:

- investing trust capital or reviewing investments
- acquiring or managing land
- appointing someone to give proper advice or reviewing/selecting agents to carry out delegated responsibilities
- insuring trust properties
- exercising powers to compound liabilities, and
- dealing with audits and valuations of trust property.

The trustee may be liable under law for any act or default by their appointed agents, if they fail to deliver the duty of care responsibilities, when drawing up investment policy statements (IPSs) or entering into or reviewing compliance matters. For professional trustees, the duty of care is taken further in the sense that they must select investments with the prudent person rule, looking after the interests of others. In addition, when investing trust money, trustees must treat the beneficiaries impartially and seek to balance the interests of providing income and preserving capital value.

The following steps have to be taken by the trustees:

- Review the trusts aims and objectives.
- Decide which responsibilities should be delegated to agents.
- Review and reconcile the investment management, nominee and custodian arrangements with trust rules.
- Trustees of charitable trusts must act in accordance with Charity Commission rules on the selection and appointment of custodians and nominees.
- Check that investment advice and management is provided by qualified professionals.
- Prepare, review and revise the trust's IPS.

3.5.2 General Investment Powers

In the Trustee Act 2000, trustees have been given the flexibility to make investments in any asset classes that are expected to produce an income or capital return. The Act refrains from defining the nature of the investment narrowly: it should be in an asset class that is suitable or appropriate for the needs of the trust.

- The responsibility requires that the trustee employs appropriate skills in stock selection within each asset class.
- They trustees must be satisfied that the type of any proposed investment is right for the trust, and they have a duty of care to consider whether a particular investment of that type is a suitable one for the trust to make.
- Trustees should try to consider the whole range of investment options which are open to them; how far they should go here will depend on the amount of funds available for investment.
- Finally, the investment portfolio should be diversified (see chapter 6, section 2.7); again, how far the trustees go in this regard will depend on the amount of funds available for investment.

From a practical point of view, this implies that the trustees must engage in the following process:

- Create and review investment objectives and define the requirements precisely. Trustees must continually refer back to the standard investment criteria to check that they are being fulfilled.
- Work with the appointed investment manager to set and review the IPS. This ensures that the manager is fully conversant with the plan requirements.
- Agree the terms of the investment engagement with the investment manager and secure a written agreement. The policy must be written so that all the functions are carried out in the best interests of the trust.

Trustees must periodically review the investments of the trust. The nature and frequency of these reviews are up to the trustees to decide, but the reviews should be proportionate to the nature and size of the investment portfolio. To review too infrequently may result in losses or missed opportunities; changing investments too frequently may incur unnecessarily high levels of transaction charges.

Before exercising any power of investment and when reviewing the trust's investments, trustees must obtain and consider proper advice from a suitably qualified adviser (who may be one of the trustees – see section 3.5.3 below), unless the size of the funds available for investment is so small that seeking investment advice is not cost-effective.

3.5.3 Rules on the Appointment of Nominees, Custodians and Investment Managers

Trustees have been given the power under the Trustee Act 2000 to appoint a nominee to hold the title to the trust's investments and/or a custodian to look after the documents of the title.

These agreements have to be made in writing and trustees have to check that the nominee:

- is separately incorporated from the investment manager
- is a non-trading company, and
- provides an insurance cover/indemnity over and above the statutory limits.

Many trustees will consider it best to place the management of the trust's investments in the hands of a specialist.

There are two main ways of doing this:

- investing in one or more CISs (eg, unit trusts and OEICs; and/or, in the case of charities, CIFs and CAIFs), or
- delegating their investment decisions by appointing an investment manager.

For smaller trusts, the first option may well be a cost-effective way of achieving a professionally managed and balanced portfolio. However, trustees must still fulfil the investment duties described in the paragraphs above and satisfy themselves with the suitability of any collective scheme as an investment vehicle for the trust.

Larger trusts with significant funds may consider appointing an investment manager; this is unlikely to be cost-effective for smaller trusts. It involves the trustees in a number of extra duties in appointing an investment manager, providing them with direction as to the trust's investment policies, and reviewing their performance.

The advantage of using an investment manager is that the manager can pursue an investment strategy which is tailor-made to the trust's needs. However, this advantage comes at a cost, both in terms of fees charged for the service and in terms of the trustees having to discharge the extra responsibilities referred to above, in their relationship with the investment manager.

3.5.4 Other Duties

Some other duties of trustees with respect to investments are to:

- manage the risks the trust faces, balance those risks against the potential returns from particular investments, and be careful to avoid undue risk to the trust's funds
- invest in markets where financial services are closely regulated, and where compensation schemes are in place, and
- be particularly wary of making speculative forms of investment.

Trustees are not liable to make good any loss to the trust incurred simply because an investment made by them is unsuccessful. However, trustees may be liable if, in making or retaining the unsuccessful investment, they have acted outside the scope of their powers, or failed to discharge their duties.

4. The Advantages of Repaying a Mortgage and Other Borrowings

Learning Objective

7.3.9 Analyse the merits and disadvantages of paying off mortgage or debt compared with investing surplus funds

4.1 The Relationship between Investment and Borrowings

At different points in a typical investor's financial lifecycle, they will tend to:

- have surplus funds (for example, someone in middle age and middle management, with solid earnings, having paid off the mortgage and seen any children reach adulthood), or
- be cash-poor and tending to have a certain amount of indebtedness (perhaps someone in young adulthood, while in the early stages of a career, with young children to raise and/or a mortgage).

These are only stereotypes and not everyone follows such a pattern. In addition, there are times when people have both debt and investable cash.

It may seem irrational to invest money while also paying interest on a loan – after all, loan interest is typically higher than the interest paid on savings accounts of similar size and term. Sometimes, however, it will be appropriate to allow the investor to remain in some debt and invest any liquid capital they have in the markets. At other times, this may not make financial sense; rather, it may be more prudent to pay off existing debts before risking committing capital to the markets.

In weighing up the merits of repaying debt, against those of investing surplus cash, the factors to be considered include:

- whether the debt is fixed rate or variable (will the client be able to keep up the repayments if interest rates go up, if their money is tied up in the markets?)
- any penalties on early repayment of the loan
- the likely direction of interest rates
- the nature of the debt (for example, it may be appropriate to allow a fixed-rate, fixed-term mortgage to run rather than paying it off, if the investor has a good deal on it and wishes to begin investing for the future), and
- the investor's tax status (eg, if an investment is particularly tax favourable, then this may be an additional factor to weigh against the disadvantages of carrying a debt burden).

Many people with capital available to invest may also be owner-occupiers (homeowners) with a mortgage. Should such a person use free capital to pay off all or part of their mortgage rather than invest the money? The cost of maintaining the mortgage can be quantified in terms of the interest cost.

Suppose that an individual has a repayment mortgage for £50,000 and has £50,000 in cash. If the interest rate on the mortgage is 5% and the after-tax rate of interest paid on deposits is 3%, then the net cost of keeping the mortgage, instead of paying it off, is £1,000 pa (ie, 2% of £50,000).

What if the individual is considering investing the available sum of £50,000 in equities? This obviously involves taking a risk with the money, and the sum could either grow or fall in value.

Generally, it is well worth someone considering paying off part of their mortgage if they can. This will reduce their interest repayments in the future and may bring forward the day when they are free of mortgage debt. The alternative of investing the money will also be considered by some and is a valid strategy for someone who is not risk-averse.

It is also worth bearing in mind that a homebuyer who has an interest-only mortgage backed by a repayment vehicle (such as an equity ISA) is effectively choosing to take the risk of investing in equities (through the ISA) rather than withdrawing and using those funds to partially repay the mortgage.

There are various ways that an individual can consider balancing the relationship between borrowings and capital for investing. The availability of offset mortgages (which allow the net outstanding borrowing to be set against cash balances) has increased the flexibility that can be employed in reaching a balance that suits the individual.

5. Investment Solutions

Learning Objective

7.4.2 Apply an appropriate investment allocation strategy that best meets the following criteria: client's financial objectives and priorities; client's risk tolerance; appropriate fees and charges; portfolio turnover ratio (PTR); client suitability requirements; adequate diversification and correlation benefits; additional risk, timing and liquidity factors where asset accumulation and decumulation are relevant features

5.1 Investor Circumstances

It is possible to identify a typical financial lifecycle (and the financial needs that accompany this). However, bear in mind that every case is different and there may be many variations in individual circumstances, that cannot easily be fitted into standard categories. In any event, we can identify certain factors that affect an investor's circumstances.

When considering an investor's objectives and risk profile, their wealth is an important consideration. If there is free capital to invest, then clearly it is sensible for the individual to take steps to make the best use of that capital.

It is possible, although not generally advisable, for someone with little wealth to gain exposure to investment markets (eg, by borrowing money to invest; or by using investments such as derivatives or spread betting, to gain a greater exposure than the individual's free resources). When investing in risky assets such as equities, a good principle is the often-stated one that someone should only invest what they can afford to lose. Someone who borrows to invest, without having other capital to back it up if things go wrong, has the problem that they may end up with liabilities in excess of assets.

An investor who uses instruments such as derivatives to increase their exposure to the markets should maintain other accessible resources (for example, cash on deposit) that can be used to meet losses that may arise. It is also important that they understand and accept the risks involved.

As we have seen in section 2.2.1, the client's age, stage in the lifecycle, and commitments all affect their risk profile. Adventurous risk-taking may be unwise for someone with heavy financial commitments.

Further, time can be a factor: someone who works full-time and/or has a family and other dependants may have little time left to manage their investments (even if they had the inclination and skills to do so). Their time commitments may mean that they are more likely to use professional financial advice and management.

5.2 Affordability and Suitability

In considering what recommendations to make to an investor, a planner or adviser needs to take into account not just the factors external to that investor (the investment and economic environment) but also those internal to them (eg, their own financial situation, and psychological factors such as their appetite for risk). These factors affect what investments will be suitable for them, in their current situation and what investments they may be able to afford on an ongoing basis.

Affordability and suitability are covered in more detail in section 2.7 of this chapter.

5.3 Investment Allocation Strategy

Asset allocation strategy is the construction stage of the portfolio management process. Bearing in mind the mandate from the IPS, a portfolio manager gets to work on the selection of assets, processing capital market expectations and developing the model inputs that are required to build a suitable portfolio that meets the client's objectives.

Asset allocation is covered in chapter 6, section 2. Note from this chapter that the main asset classes are cash, bonds and equities; and, more recently, property. Interest in alternative asset classes (eg commodities) has also increased, as portfolio managers seek better diversification and correlation opportunities, and/or yield enhancement. In chapter 3, section 2.2.4, we covered ways in which diversification can be achieved (eg, by sector, geographically and by asset class); and correlation in chapter 3, section 2.3.2.

5.3.1 Weighting of Asset Classes

In strategic asset allocation (SAA), the portfolio manager has to determine the asset allocation or the proportions of weights given to each asset class that is invested in a portfolio. Asset allocation reviews are carried out on a regular basis during the management of a funded portfolio. For each asset class that is considered as a viable class for the portfolio, there will be a comprehensive view of capital market expectations formed over the investment period.

With capital market expectations and the portfolio objectives in hand, the asset allocation decision is then taken. The inputs to this decision are often fed into an optimiser – the optimisation methodologies are beyond the scope of this syllabus and use variants of the Markowitz mean-variance approach.

Note that a large number of fund managers nowadays use established procedures that have a quantitative flavour.

On the other hand, some investment advisers (particularly those serving individual investor clientele) may use a qualitative approach to allocation, based on their experiences. In fact, most advisers utilise both quantitative and qualitative judgements in making recommendations.

Experience-Based Approaches

Although qualitative approaches offer a disciplined basis for the asset allocation process, there are advisers who prefer an experience-based qualitative method that is also grounded in financial theory. The lengthy training and experience of an adviser adopting a qualitative approach has worked well for some clients in the past.

Some popular experience-based approaches are:

- **A 60/40 allocation** – as we saw in section 2 of chapter 6, this may be a good starting point for an average investor under normal market conditions, although the topic of whether the 60/40 allocation is still fit for purposes is hotly debated by asset allocators.
- **Increase bond weighting as risk aversion increases** – conservative investors value low volatility. Hence, increasing the allocation to bonds should lead to lower portfolio risks.
- **Increase allocation to stocks as the investment time period gets longer** – this is based on an idea called time diversification which has been the subject of debate for decades. According to proponents of time diversification, stocks are less risky (ie, volatility of risky assets falls) if held over a longer time period, however, critics argue that holding a risky asset over the long term will not reduce its inherent riskiness given its serially uncorrelated returns.

5.3.2 Rebalancing and Portfolio Turnover Rate (PTR)

After a portfolio allocation decision has been taken and the fund is fully invested, the portfolio will have to be rebalanced over the investment time period. Regular rebalancing of a portfolio can help to manage sequencing risk. This is the risk that the timing of withdrawals from a portfolio will have a negative impact on the overall rate of return available to an investor. For example, if portfolio returns are weak and the investor is withdrawing an unsustainably high income, this can affect the long-term value of their portfolio and thus the ability to meet future withdrawal requirements.

While there are no official time schedules to follow in this regard, it is commonly recommended to rebalance at least once a year, with some investors rebalancing quarterly or six-monthly.

Rebalancing may also be done on percentage-of-portfolio basis. This form of rebalancing occurs when an asset class weight passes a threshold or a trigger point (ie, when the portfolio deviates from the original allocation by a certain amount or percentage). When this occurs, the asset weight must be rebalanced all the way back to original target weight.

In a SAA setting, since the timeframes are long, the rebalancing is only necessary if underlying asset prices have changed appreciably and have moved the portfolio weights away from target weights past the tolerance limit agreed within the IPS frameworks.

How frequently the securities in the portfolio are changed over a period is given by the portfolio turnover rate (PTR). The PTR is calculated by dividing the total amount of purchases or sales (whichever is less) over the period, by the NAV of the portfolio. A PTR of 20–30% is considered to be low (ie, an average holding period of about three to five years).

The higher the PTR, the more active the investment approach (eg, a PTR of 50% implies an average holding period of two years; of 100% for one year; of 200% for half a year; and so on). Turnover of securities may also be higher during period of increased market volatility. Further, a higher PTR will imply higher transaction costs (eg, broker commissions and dealing costs), thereby increasing the expense ratio of the portfolio, which could impact on the portfolio's performance.

Note that a PTR of 100% or more does not necessarily mean that every single security within the portfolio has been replaced over the period. Rather, it could be that the same security has been bought and sold. Alternatively, it could be that there are long-term holdings (which serve as core investments), around which the manager is making strategic adjustments to capitalise on market opportunities or manage risk.

5.3.3 Appropriate Fees and Charges

Advisers and portfolio managers charge a fee for the products and services that they provide. The charges that they levy may well be worth the money, if their advice and services help the client to achieve their financial goals.

There are three ways in which advisers typically charge their clients:

- **Percentage-based fees** – this is the most common type of fee across the financial advice industry. On average, advisers charge about 2-3% of the initial amount invested, then an annual fee of about 1% of total assets under management (AUM) for ongoing advice. While the fee that firms levy will vary, adviser charges are usually the same for all of their clients, irrespective of their individual wealth or financial needs.
- **Fixed fees** – other advisers have a set figure that they charge clients for advice. This fee will vary depending on the adviser, the client, and the type of work involved. Some investment platforms offer one-off advice from a few hundred to several thousand pounds (depending on the complexity of the client's needs); and in some cases, these advisers only recommend their own products and services.
- **Hourly fees** – this is a less common approach, and the rate depends on the amount of time that the adviser spends doing the work for their clients. This can be cost-effective for clients with straightforward needs; however, if their case is complex and advisers have to spend more time on it, then this can drive up costs quickly.

Alternatively, some advisers apply a hybrid approach, whereby they take elements of the above strategies – for example, a fixed or hourly fee for general advice, but a percentage-based fee for investments or pensions.

Note that these charges do not include the underlying product fees (eg, custody) and portfolio management fees. Portfolio management fees vary, although they usually range from 0.2% to 2% depending on factors such as the management style – for example, firms that take a more passive approach generally charge a lower fee than those that manage investments more actively.

5.3.4 Asset Accumulation and Decumulation

As we saw in chapter 5, section 14.7, the accumulation phase is the period during which an individual is building up their savings and the value of their investment portfolio, while the decumulation phase is the period during which they have retired and spending the money.

To summarise some of the key points from that chapter:

- The longer the accumulation phase, the more time there is to ride out market fluctuations. Investors in the accumulation phase also typically have less of a need for liquidity. All in all, this means that they can afford to take on more risk.
- As the investor draws nearer to the decumulation phase, they will generally opt to protect their accumulated investment against any downturn in the market. This, along with an increased need for liquidity, means that they are likely to become more conservative in their approach.

5.4 Identifying Suitable Product Solutions

Learning Objective

7.3.3 Assess the following factors when selecting suitable product solutions: impact of new solutions on existing arrangements; range of solutions available to suit different circumstances; range of criteria for matching solutions to client needs and demands; discounting alternatives

An adviser needs to be able to analyse a wide range of potentially suitable investment products, taking into account the investor's existing arrangements. Depending on the terms of their engagement, they are likely to need to take a comprehensive approach in arriving at the proposed solutions.

The client's needs and demands should be considered in order to match possible appropriate solutions to these needs and demands in the light of the features of the various investment alternatives. It is not necessarily the case that only one possible solution should be recommended; there may be a number of feasible solutions that can be discussed with the client.

5.4.1 The Impact of New Solutions

It is not always realistic or beneficial to chop and change between different products as they are launched; some products carry penalties for early encashment, and others simply need time to deliver their benefits. However, in a rapidly evolving and dynamic market, it is possible for better value options to be developed into which the investor can switch, in some cases.

Various considerations may be involved when taking over an existing portfolio and reconstructing it, although there will be the usual need to consider the individual's requirement for accessibility and liquidity, income needs, attitude to risk, timescale and tax position. If clients have investments that no longer meet current requirements and circumstances, they should be changed; however, an adviser may face a dilemma if there are existing life assurance policies or products which could carry heavy surrender penalties on early encashment.

There may also be tax penalties if investments are disposed of, making it hard to carry out a wholesale realignment. For property, shares and collective investments not sheltered within a tax wrapper (eg, a pension, or an ISA for UK investors), there may be a CGT charge. Encashment of a life assurance investment bond may create a chargeable event, resulting in a possible liability to higher rate tax.

5.4.2 The Range of Solutions Available

The range of product solutions available in the market is vast and diverse, catering to the unique needs and preferences of clients. The financial landscape is constantly evolving, and new investment products are introduced regularly. Each product has its own characteristics, risks, and potential returns, so advisers should carefully evaluate their clients' circumstances to determine the most suitable options for their specific needs and requirements.

Advisers can filter down product solutions by considering several factors to align these solutions with their clients' needs and requirements. Key steps include:

- **Understand client goals and risk tolerance** – advisers should have a thorough understanding of their clients' investment goals, risk tolerance, time horizons and other requirements. This knowledge helps them to filter suitable product solutions.
- **Evaluate investment product characteristics** – this includes historical performance (eg, risk-adjusted returns), fees and charges, liquidity, transparency and tax implications. Other considerations include minimum investment levels and investment strategies.
- **Consider diversification and asset allocation** – by assessing the correlation between investment products, advisers can determine which options complement each other and provide effective diversification.
- **Stay informed and conduct due diligence** – advisers need to stay updated on industry trends and conduct thorough due diligence on investment products. They can analyse product documentation, review historical performance, and assess the reputation and credibility of the product providers.

By following these steps, advisers can effectively filter down the range of investment product solutions and recommend options that align with their clients' goals, risk tolerance, and preferences. Regular communication and ongoing review of clients' circumstances are also important to ensure that the chosen products remain suitable.

5.4.3 Matching Investment Solutions to Client Circumstances, Needs and Demands

Depending on an adviser's status – independent, tied or multi-tied (restricted), as described in section 1.1 of this chapter – they may be required to advise their client on solutions from the whole of the market, from just one provider, or from a limited number of providers. It is important that this is made clear to the investor, so that they can consider the effects of this on the advice received.

Advisers need to be able to apply a range of criteria when matching investment solutions to client circumstances, needs and demands. They must recognise that each client has their own views, goals and attitudes. Attitudes to risk vary widely according to the different objectives of the investor. Accordingly, investment choices vary widely too. Some individuals will be reluctant to take on any significant risk of loss of their capital, while others are prepared (in effect) to gamble with their savings. People are likely to take notice of the growth potential of an investment, while some could be less willing to appreciate the risk involved. The adviser needs to take special care to make such a client aware of any risks.

If a client has a specific target for a particular investment (eg, to pay for children's education, or to pay for a holiday), the adviser may choose lower-risk investment solutions for the funds intended to reach that target then they will for the client's other investments. If an individual is prepared to take on risks for a proportion of their savings and does not require those funds for a specific purpose, then equities may be an appropriate choice for that individual.

6. Presenting Recommendations

Learning Objective

7.4.3 Understand the factors which influence the way in which recommendations are presented

Providing a written report to clients is an important part of the process of giving financial advice.

A written report allows advisers to convey the recommendations that they have already discussed orally with clients in meetings. The written format makes some aspects of observations and recommendations easier for the client to understand.

Further, a written report provides a record of what the adviser is recommending, and on what key information it is based. A report in writing should avoid the potential for misunderstandings about the advice that has been given, thus acting as a safeguard for the adviser in justifying their work, as well as a document of record for the client.

In the UK, while there is no regulatory requirement as to what a financial planning report should include, the FCA has identified some examples of good practice that they have observed. However, firms may choose to adopt an alternative approach, provided that they still comply with the FCA's principles and rules.

Examples include:

- A statement of the client's objectives.
- A summary of the client's income and assets, and other relevant circumstances/considerations.
- Recommendations, including any proposals for immediate action, as well as longer-term suggestions for the client to consider in the future. These should be backed up by the reasoning behind them (why they are felt to be suitable) and any risks or inflexibilities inherent in the proposed solutions. These recommendations should include timescales for implementation.
- Appendices, including any data that is best presented separately, if appropriate.

Product quotations, illustrations and brochures should be presented in an orderly way, possibly with an index listing the various items being sent to the client. The language in the report should be as concise and clear as possible. The language used should not include jargon, except when necessary to explain points being made.

Following the preparation of a written report, it is often sensible to have a face-to-face meeting with the client, to give them an opportunity to clear up any misunderstandings that may have arisen with the financial planning report, and to allow them to ask questions where needs be.

6.1 Clients' Understanding

Learning Objective

7.4.4 Understand how to check clients' understanding of recommendations

Regulators worldwide require firms to have regard for the information needs of their clients, taking into account the client's level of sophistication and experience. An adviser should not recommend a transaction or act as a portfolio manager for a client, unless they have taken reasonable steps to help the client understand the nature of the risks involved. Indeed, ensuring that a client has understood investment recommendations is a crucial part of an adviser's responsibility. How can they check a client's understanding in this regard?

To start, during the discussion of investment recommendations, advisers should practice active listening. By asking open-ended questions, advisers can encourage clients to express their understanding, concerns, or any areas where they may need further clarification. By actively listening to clients' responses, advisers can gauge their level of comprehension.

Scenario-based discussions can help advisers assess a client's understanding. By presenting hypothetical situations and asking the client how they would apply the recommendations or handle potential challenges, this can reveal whether the client grasps the underlying concepts and can apply them in practical scenarios.

To ensure clarity and mitigate misunderstandings, advisers can provide written documentation that summarises the investment recommendations – note that the requirements for presenting recommendations in a written document varies, depending on the jurisdiction and regulatory framework governing advisers. Advisers can request that clients review and sign the documentation, indicating their understanding and agreement with the recommendations.

Following on from this, advisers can recap and summarise the key points for the client, thus allowing the client to hear the information again. This ensures that the client has grasped the main concepts. Advisers could then ask the client to provide their own summary of the recommendations to verify their understanding, and/or to proactively check whether the client has understood the contents of the report (eg, by asking clarifying questions such as *'Are you clear with what I mean by equities and bonds?'* and *'May I check you understand what is meant by ESG risk?')*.

Throughout this process, advisers should actively encourage clients to ask questions about the investment recommendations. In doing so, the adviser demonstrates that they value the client's input and wants to address any uncertainties. It also allows the adviser to gauge the client's comprehension and identify areas that may require further explanation.

7. Consumer Rights and Regulatory Requirements

Learning Objective

7.4.5 Apply consumer rights and the regulatory requirements to the provision of investment advice

As in other areas of consumer law, the rights of a consumer in financial services are dictated by the terms of the contract drawn up between the client and the financial institution. In the contract, there may be stated and implied terms.

7.1 Consumer Acts

When buying goods and services, customers are protected by consumer protection laws, which have been put in place to protect customers from dangerous goods and services, defective products, fraudulent and unethical business practices, and unnecessary economic loss. Such laws therefore have an important part to play in a reliable market economy as they help to ensure that sellers remain honest.

7.1.1 The UK

In the UK, the Consumer Rights Act 2015 protects customers against faulty goods, poor service and problems with contracts. This Act, alongside various regulations, set out the basic rates that govern how consumers buy and how businesses sell to those consumers. The primary agencies responsible for the enforcement of consumer protection laws are the Competition and Markets Authority (CMA) and Trading Standards Services (TSS).

Consumers are also safeguarded by various laws ensuring fair treatment and transparency in commercial transactions. Key legislation includes the Sale of Goods Act 1979, the Consumer Rights Act 2015 and the Consumer Protection from Unfair Trading Regulations 2009, which set out consumer rights and protections.

The Consumer Credit Directive (CCD) was incorporated into UK law after the EU transition period, aligning UK and EU regulatory frameworks. It complements the Consumer Credit Act 1974. In 2023, the UK government launched a consultation on reforming consumer credit laws to reflect the shift towards digital financial services; however, a specific timeline for reform remains uncertain.

7.1.2 Europe

In the EU, three consumer laws provide protection: the Consumer Rights Directive (which offers consumers certain rights), the Unfair Contract Terms Directive (which prohibits standardised agreements that would be detrimental to consumers) and the Unfair Commercial Practices Directive (which bans unfair business practices).

Under the European Communities (Unfair Terms in Consumer Contracts) Regulations 1995, unfair contract terms cannot be enforced. The Consumer Credit Directive (CCD), which was first introduced in 1987 and updated in 2010, harmonised rules for consumer credit across the EU, covering personal loans between €200 and €75,000.

In 2022, the European Commission (EC) replaced the CCD to modernise regulations, including digital disclosure requirements and expanded coverage for smaller loans, crowdfunding platforms and 'buy-now-pay-later' products.

7.1.3 The US

In the US, various federal and state laws (each of which governs a particular area of the economy) make up consumer protection laws. Not all jurisdictions protect consumers in the same way. These laws are enforced by the Federal Trade Commission (FTC).

The Dodd-Frank Act restructured US financial regulation and created the Consumer Financial Protection Bureau (CFPB) in 2011. The CFPB oversees financial institutions and protects consumers from abusive practices in banking, lending and credit. Its jurisdiction includes banks, credit unions, payday lenders, mortgage servicers, debt collectors and more. The CFPB enforces federal consumer financial laws, thus ensuring fair treatment and promoting informed financial decision-making.

However, under the Trump administration, the CFPB has been effectively shut down, with the Office of Management and Budget (OMB) ordering a halt to nearly all operations in February 2025. This includes suspending rulemaking, investigations and supervisory activities, although the agency can still accept consumer complaints. The move reflects a broader push to scale back federal regulatory agencies.

7.1.4 China

China's consumer finance sector has grown significantly, with record-breaking bank lending in recent years. In response, regulators have introduced new consumer protection measures, including the Financial Consumer Rights Protection Implementation Measures (2016) and the Notice on Regulating and Rectifying 'Cash Loan' Businesses (2017), which prohibits loans to borrowers without income.

The People's Republic of China (PRC) Law on the Protection of Consumer Rights and Interests Law, which was passed in 1993, defines what a consumer is, and their rights and interests when purchasing and using goods or receiving services for daily consumption. The law was amended in 2013, in part driven by technological changes and an increasingly sophisticated online retail market.

In 2023, the Banking and Insurance Institution Consumer Rights and Interest Protection Administrative Measures took effect, imposing stricter governance and consumer protection requirements on banks and insurers. These regulations aim to enhance financial stability while ensuring fair treatment of consumers.

7.2 Cooling Off Periods

In certain circumstances, customers who are entering into an investment arrangement are entitled to a period of reflection during which they can decide whether or not to proceed with their purchase. If a right to cancel is provided to a customer, the firm must give a clear and prominent notice in writing, either before or, if not possible, immediately after the sale. If the customer exercises their right to cancel, the effect is that they withdraw from the contract, which is then terminated. In the UK, the absolute minimum cooling off period that can be given to a customer is 14 days.

7.3 Ombudsman Service

Various countries have their own ombudsman services to handle disputes between consumers and regulated firms.

In the UK, should a customer have a complaint about a regulated firm (eg, about advice that they have received, or if they are unhappy with a financial product or service) then they should contact the firm directly, in the first instance, in order to put things right. The firm must investigate and either resolve the complaint or send a final response letter within a specified time frame (depending on the type of firm and/or service provided).

If the customer is unhappy with the final response, they can escalate their complaint to the Financial Ombudsman Service (FOS). The final response should explain the outcome and inform the customer of their right to refer the matter to the FOS within 6 months. The FOS will investigate the complaint, taking into account the evidence provided by the firm and customer when making its decision. If accepted by the customer, then the decision becomes legally binding on the firm.

As of 1 April 2025, the FOS monetary compensation limits are:

Date of act or omission	Date of referral to the FOS	Limit that applies
On or after 1 April 2019	On or after 1 April 2025	£445,000
Before 1 April 2019	On or after 1 April 2024	£200,000

Source: Financial Ombudsman Service[5]

The limit is increased each year in line with inflation, as measured by CPI.

5 Financial Ombudsman Service, April 2024. Compensation. Retrieved from https://www.financial-ombudsman.org.uk/consumers/expect/compensation (Accessed: March 2025)

Once a complainant accepts the FOS's decision, they cannot later bring court proceedings to claim additional compensation about the same matter. While individuals can bypass the FOS and take a firm directly to court, this is relatively uncommon among private individuals. In contrast, litigation (particularly in the form of group claims) is becoming increasingly prevalent.

Note that the FOS is undergoing reform. In November 2024, the UK government launched a consultation to modernise the complaints system, aiming to resolve issues more efficiently and reduce the number of complaints escalated to the FOS. Additionally, from April 2025, the FOS introduced a £250 fee for claims management companies (CMCs) and legal professionals submitting complaints; consumers can still use the service for free.

7.4 Other FCA Regulations

As set out in the Principles for Businesses (see section 2.7.1), financial advisers – and the providers of the products recommended – are required to communicate information to a customer in a way that is clear, fair and not misleading. They must also communicate in a way which has regard for the customer's knowledge of the business. This implies that firms should be considering their customers' level of financial sophistication, tailoring the language they use accordingly, and ensuring that any matters that may need explanation are made clear.

There are specific and detailed rules in connection with:

- **Financial promotions** – these refer to communications that are, or may be, inducements to clients, in connection with regulated activities, through any medium. The intention is to ensure that promotions are fair and not misleading, and that their target audience receives clear and adequate information which is appropriate to its level of understanding.
- **Status disclosure** – firms must tell clients and potential clients about their status (independent, or tied) and the way in which they are remunerated in a prescribed format.
- **Terms of business and client agreements** – the FCA has rules on when firms must provide their clients with their terms of business, and what these must contain.
- **KYC** – the FCA requires that financial advisers ensure that they have found out enough about their customer to ensure that their advice is appropriate to their circumstances.
- **Execution-only transactions** – refers to a transaction or account when no advice is given, and the provider exercises no discretion. The client makes their own decisions as to what transactions are to be undertaken and instructs the provider to put them into effect. There are various differences between the regulatory regime for this type of business and for business when the provider gives advice or exercises discretion.
- **Charges, commissions and product disclosure** – advisers have to disclose a considerable amount of information about the way in which they are paid.
- **Cancellation and cooling-off** – provisions apply to a range of packaged investment and insurance products. This allows clients who have bought on the basis of advice, the opportunity to consider what they have done, for a short period after the transaction has been effected and, if they believe it is appropriate, to change their minds. This period for reflection is known as the cooling-off period. They are not applicable to non-packaged investments, such as the purchase of direct shareholdings.

8. Performance Benchmarks

Learning Objective

7.4.6 Assess the factors influencing the choice of benchmark and the basis for review: portfolio's asset allocation; risk/return profile; alternative investments; taxation; peer groups; maintenance of capital value

Once the portfolio has been constructed, the portfolio manager and client need to agree on a realistic benchmark against which the performance of the portfolio can be judged.

Performance evaluation is a relative concept and managers need to show how well they have done in their efforts to achieve their investment objectives. As an external measure, this benchmark should possess certain basic properties, the main ones of which are:

- **Specified in advance** – the benchmark is specified in the IPS at the start of the investment process and is known to all parties.
- **Appropriate** – the benchmark is consistent with the manager's investment style or area of expertise.
- **Measurable** – the returns and risk of this portfolio can be calculated quickly and frequently, as required.
- **Unambiguous** – the identities and weights of the securities or factor exposures constituting the benchmarks are clearly defined.
- **Reflective of the manager's current investment expertise**.
- **Accountable** – the manager should agree that the benchmark is an appropriate measure. The manager must accept ownership of the benchmark, and be willing to be held accountable to it.
- **Investable** – it is possible to forego active management and hold this benchmark as a passively managed portfolio.

We have put the criteria in this specific order to form the acronym SAMURAI, as a way to remember them.

The choice of benchmark will depend on the precise asset split adopted, and should be compatible with the risk and expected return profile of the portfolio. For example, if a portfolio is focused on large cap US equities, the S&P 500 would be an appropriate benchmark. Alternatively, if the focus is on US small-cap or micro-cap equities, the Russell 2000 index would be more suitable. For another manager who is primarily investing in emerging markets equities, the MSCI Emerging Markets Index would be a useful yardstick or benchmark. While it may be acceptable for a small number of stocks to be selected from elsewhere, significant investment outside this universe would be unexpected. Thus, if an index is used, this should represent a feasible investment alternative to the portfolio constructed.

Portfolio performance is rarely measured in absolute terms, but in relative terms against the predetermined benchmark and against the peer group. That said, some portfolios may seek to maintain an investor's capital value over a period of time, either in nominal terms (producing a positive return in any market conditions) or in real terms (keeping pace with inflation). In these cases, a short-term interest rate (eg, SONIA or €STR) or a rate of inflation (eg, RPI or CPI) may be appropriate.

In addition, indexed portfolios are also evaluated against the size of their tracking error, or how closely the portfolio has tracked the chosen index. Tracking error arises from both underperformance and outperformance of the index being tracked.

It is essential that the portfolio manager and client agree on the frequency with which the portfolio is reviewed, not only to monitor the portfolio's performance but also to ensure that it still meets the client's objectives and is correctly positioned given prevailing market conditions.

There are three main ways in which portfolio performance is assessed:

- **Comparison with a relevant bond or stock market index.**
  - An index comparison provides a clear indication of whether the returns of the fund/portfolio exceed that of the index that is being used as the benchmark return.
  - As well as the main stock market indices that are generally seen, many sub-indices have been created over the years which allow a precise comparison to be made.
- **Comparison with similar funds or a relevant universe comparison.**
  - Returns can be measured against the performance of other funds/portfolios which have similar investment objectives and constraints.
  - A group of similar portfolios/funds is referred to as an investment universe.
- **Comparison with a custom benchmark.**
  - Customised benchmarks are often developed for portfolios/funds with unique investment objectives and/or constraints.
  - If a portfolio/fund spans several asset classes, then a composite index may need to be constructed by selecting several relevant indices and then multiplying each asset class weighting to arrive at a composite return.

8.1 Implications of Responsible, Sustainable and Ethical Restrictions on Selecting an Appropriate Benchmark

There are many different responsible, sustainable and ethical indices applying different screening processes, methodologies and formulae (see chapter 8, section 1.2.8).

While it is generally important that investors have choice, one risk of having too many options is that it becomes increasingly confusing and complicated for investors to select a benchmark that appropriately reflects their values and morals. In turn, should an inappropriate benchmark be selected, it becomes difficult for investors to truly understand how their portfolio has performed, and whether it is providing them with value for money.

Notably, investors may choose to measure the performance of their portfolio against a conventional index (eg, the FTSE All-Share or MSCI World) instead of an ethical, responsible and sustainable one. While the conventional index will likely include geographic regions, industries/sectors, and companies that an investor would prefer to avoid, such a selection can demonstrate to the investor how their portfolio has performed against its non-responsible, non-sustainable and non-ethical peers – in other words, whether the application of exclusion criteria has been beneficial to financial returns.

8.2 Peer Group Benchmarking

Portfolio evaluation can be undertaken by reference to a relevant peer group (also referred to as manager universes). The peer group could be a cross-section of fund managers who are also responsible for the full range of management decisions (asset allocation and stock selection) for portfolios or funds with similar objectives and constraints.

This type of benchmark serves the needs of individual investors who would like to know-how their manager's performances rank with other managers in comparable wealth management firms.

Research organisations such as Trustnet and Morningstar have established various peer group categorisations in relation to unit trusts and mutual funds, and there are newer organisations that are becoming increasingly well established for providing peer reference points for the world of hedge funds and alternative investments. The performance results are collected frequently, and various 'league tables' are published showing the top ten funds for each peer group such as emerging markets, biotechnology or, in the case of hedge funds, in statistical arbitrage strategies or long/short equity funds, among others.

With peer group benchmarking, a fund manager's assessment criteria may then be defined; for example, has the manager outperformed the peer group's median performance? Consider a scenario where a fund has outperformed the peer group average by 5% over one year. This may look attractive on the surface; however, if the fund's stated objective is to outperform by 10% each year, then the fund has not achieved its set objective. This discrepancy will need to be considered (alongside other factors, such as the assets it will invest in to generate that return and, consequently, whether it is aligned with the client's risk profile).

Peer group benchmarking has been criticised as tending to produce asset allocation decisions based simply on what other funds are doing, creating a kind of 'herding' mentality rather than a dedicated focus on the needs and original mandate of a fund. A peer-group benchmark does not show whether a portfolio manager is performing well in absolute terms. If all of the peer group are poor managers, someone may still be top of the peer group but show poor absolute performance.

8.3 Customised Benchmarking for Pension Funds

Customised benchmarking is appropriate where the asset allocation decision and stock selection decisions are separable. For example, the asset allocation decision may be taken by the trustee, with the stock selection decisions being taken by managers.

The manager's performance can then be assessed by reference to an appropriate index or customised benchmark based on the assets under their management. It may be decided to create a custom index from security prices and returns for a non-traditional set of assets, and use that as the suitable benchmark in the case of a heterogeneous group of assets which are under management. Setting the limits for any permitted divergence from that index is extremely important. If these limits are set very tight, then the fund would effectively be a pseudo-tracker, but paying active management fees when the true style is passive, which has recently been deemed unfair to the customer.

It is worth noting at this point that the widely accepted practice of using a benchmark based on a manager universe or peer group is not acceptable. This is because manager universes are collections of funds deemed to be broadly similar to the fund being evaluated – thus, they are not investable and are not specified in advance, and they are not a passive broad asset class equivalent of the universe available to the fund manager.

Further, manager universes will suffer from survivorship bias since poorly performing managers will drop out (or their funds merged with better-performing funds) and cease to be included in the peer group, so that the peer group that is actually evaluated for performance will not include the whole set of managers that commenced at the start of the investment period, resulting in better performance (on average) than an investor could actually have achieved.

Another weakness is that the manager universe can be too broadly defined to meaningfully assess the skill of a particular fund manager, since peer groups can often encompass a wide range of investment styles and approaches.

8.4 After-Tax Benchmarking

Generally, benchmarks are reported on a before-tax basis – that is, they are not subject to adjustments for tax and cash flows.

The true after-tax performance of a security or portfolio depends on the investor's tax status. To give an example: two portfolios with exactly the same holdings today will have different after-tax returns if they were initiated at different points in time; and, in turn, if they have different cost bases resulting in different levels of unrealised gains or losses.

An after-tax benchmark that has been customised to the individual investor's unique circumstances could provide a better gauge for measuring performance, and allows individuals to measure whether active tax management of their portfolio has been truly successful.

8.5 Benchmarking Alternative Investments

As an increasing number of investors turn to alternative investments, one challenge that has arisen is how those investments should be benchmarked.

General, broad market indices are unsuitable for benchmarking the performance of alternative investments. Traditional risk and return measures (such as standard deviation and beta, as covered in sections 2.3 and 2.4 respectively of chapter 3) may provide an inadequate picture of the risk and return characteristics, on the basis that alternative investments are often characterised by asymmetric risk/return profiles, illiquidity, limited transparency, product complexity and complex fee structures.

That said, a variety of ratios can be calculated to review the performance of an alternative investment. For example, the internal rate of return (IRR) – as covered in section 2.4.4 of chapter 3 – is often used to evaluate private equity investments. Note, however, that a fund's IRR can be meaningfully influenced by an early loss or an 'early win' in the portfolio.

Two common benchmark approaches are custom index proxies and peer group comparisons; however, both have significant limitations when it comes to alternatives.

Let us take hedge funds as an example. As we saw in section 11.2 of chapter 5, there are many different types of strategy available. With this in mind, the risk/return characteristics of the peer group are unlikely to be representative of the fund. Hedge fund peer groups are also prone to survivorship bias (ie, the dataset considers only existing, or 'surviving', funds and fails to consider those funds that have ceased to exist). Further, hedge fund peer group benchmarks rely on the funds to self-report, and are not confirmed by the index provider, thus making these benchmarks notoriously unreliable.

Thus, conducting performance appraisal on an alternative investment can prove challenging. Lock-in periods, redemption rules and timing differences in reporting can add further complications.

Key Chapter Points

- Financial advice extends well beyond investment matters, to areas such as budgeting, borrowing and protection.
- The process of giving financial advice requires that the adviser establishes a sound relationship with their client.
- Financial advice is not usually a one-off process; periodic monitoring and review of a client's arrangements is important.
- The review will lead to the creation of a set of portfolio objectives that will summarise the client's risk and return requirements.
- The process of understanding a client's precise requirements, along with the objectives will lead to the development of a comprehensive investment policy statement (IPS).
- Investment decisions will take into account the investors' unique requirements, including responsible, sustainable and ethical considerations.
- The role of trustees is to have a duty of care over the powers they have been given to look after the financial needs of their beneficiaries. They must act in accordance with the principles of the Trustee Act 2000.
- Portfolio managers have a duty not only to meet the requirements as set out in the IPS, but also to prepare regular written reports for clients to explain and justify the investment decisions taken as a matter of record-keeping and also to protect the firm against unwarranted criticism.
- Consumer complaints can be directed to the relevant financial regulatory authority (eg, the FCA in the UK). If consumers remain dissatisfied with the outcome, they may escalate their concerns to an independent ombudsman service.
- Performance measurement is a specialised area of portfolio monitoring. Suitable benchmarks need to be identified at early stages of the portfolio management process for both actively and passively managed portfolios.
- There are three main ways in which portfolio performance is assessed: comparison with a relevant bond or stock market index, comparison to similar funds or a relevant universe comparison, and comparison to a custom benchmark.
- Some investors may choose to measure the performance of their responsible, sustainable or ethical portfolio against a conventional index, to demonstrate how their portfolio has performed against its conventional peers.

End of Chapter Questions

Think of an answer for each question and refer to the appropriate workbook section for confirmation.

1. **Why are liquidity and time horizons important considerations when advising clients?**
   Answer reference: Section 1.2.2

2. **Under the Consumer Duty, what are the three 'cross-cutting' rules that guide businesses in ensuring good customer outcomes?**
   Answer reference: Section 1.8

3. **Why do regular reviews form an important part of the service that advisers offer clients?**
   Answer reference: Section 1.10

4. **What is the difference between attitude to risk (ATR) and capacity for loss (CFL)?**
   Answer reference: Section 2.2.3

5. **What is the main principle underlying Islamic finance?**
   Answer reference: Section 3.3

6. **What are the five areas of trust law that the Trustee Act 2000 covers?**
   Answer reference: Section 3.5

7. **Provide three factors that must be considered when weighing up the merits of repaying debt, against those of investing surplus cash.**
   Answer reference: Section 4.1

8. **What does a higher portfolio turnover rate (PTR) indicate?**
   Answer reference: Section 5.3.2

9. **Describe the benefits of a written report when an adviser makes recommendations to a client.**
   Answer reference: Section 6

10. **What basic properties should a benchmark index possess?**
    Answer reference: Section 8

Chapter Eight

Portfolio Performance and Review

1. **Purpose and Concept of Benchmarking** **557**
2. **Portfolio Measurement** **562**
3. **Portfolio Review** **569**

This syllabus area will provide approximately 5 of the 80 examination questions



1. Purpose and Concept of Benchmarking

Learning Objective

8.1.1 Understand the purpose and limitations of portfolio evaluation

8.1.2 Understand the concept and purpose of benchmarking: global investment performance standards (GIPS); MSCI PIMFA wealth management benchmarks; peer group average (WM and CAPS)

8.1.4 Apply suitable benchmarks when measuring and evaluating investment performance

1.1 Portfolio Evaluation

If the performance of a fund/portfolio or its manager is to be assessed, then the first issue to address is how to measure that performance. Investment performance is usually monitored by comparing it to a relevant benchmark.

Performance benchmarks are important for three reasons:

1. They help to measure the investment performance of institutional managers.
2. They provide clients and trustees with a reference point for monitoring performance.
3. They have the effect of modifying the behaviour of managers.

It is worth pointing out that benchmarks are important, but so are fee structures. Together, they can either provide the right incentives for managers, or they can seriously distort their investment behaviour, resulting in strategies such as benchmark hugging.

As we saw in chapter 7, section 8, benchmarks must (among other things) be specified in advance, appropriate, measurable, unambiguous and investable.

1.1.1 Global Investment Performance Standards (GIPS)

Global Investment Performance Standards (GIPS) represent global standard for calculating and presenting performance figures. They have been voluntarily adopted by industry representative organisations in many countries in order to help promote best standards. They meet the need for consistent, globally accepted standards for investment management firms in calculating and presenting their results to potential clients; thus, they fulfil an essential role in investment management around the world.

GIPS are approved by the UK's Competition and Markets Authority (CMA), an independent non-ministerial government department with responsibility for strengthening business competition in the UK. This means that fund managers of pension schemes must comply with GIPS when presenting historical performance for those pension schemes to the trustees.

1.1.2 CAPS and WM

Rather than use an established index to benchmark portfolio performance, a peer group average is often employed. For example, most pension funds adopt cautious investment policies, and the guidance and benchmarks they set for fund managers means that most schemes keep their asset allocation close to the Combined Actuarial Performance Services (CAPS) or World Markets (WM) averages.

Both of these service providers create universes which are an aggregation of funds/portfolios with similar investment briefs or types of owner and are used for peer group comparisons. There are many specialist sub-groups of universe groupings to cater to a wide range of fund structures and investment management styles to provide a relevant and accurate relative comparison.

1.1.3 MSCI PIMFA Wealth Management Benchmarks

The MSCI PIMFA Private Investor Index Series is a key benchmark for UK private client portfolio performance and is widely used by investment managers and financial advisers.

The indices are based on five risk-weighted portfolios, each of which have different asset allocations to equities, bonds, real estate, cash and alternative investments. To better reflect the requirements of the Indices Committee and the wider wealth management practitioner community, four of the indices (Conservative, Income, Balanced and Growth) include an expanded range of fixed-income index allocation options to include gilts, corporate and inflation-linked bonds:

	Conservative	Income	Balanced	Growth	
UK Equities	7.5	15.0	17.5	20.0	MSCI United Kingdom IMI
International Equities	22.5	32.5	42.5	57.5	MSCI ACWI ex UK
Government Bonds	12.5	10.0	5.0	2.5	Markit iBoxx GBP Gilts

	Conservative	Income	Balanced	Growth	
Corporate Bonds	32.5	20.0	15.0	5.0	Markit iBoxx GBP Corporates
Inflation-Linked Bonds	2.5	2.5	2.5	0.0	Markit iBoxx UK Gilt Infl-Linked
Cash	2.5	2.5	2.5	2.5	BoE base rate – 0.75% (floor 0%)
Real Estate	2.5	2.5	2.5	2.5	MSCI UK IMI Liquid Real Estate
Alternatives	17.5	15.0	12.5	10.0	100% Long MSCI World DMF + 70% Short MSCI World

Source: MSCI[1]

The asset allocations weightings are reviewed on a quarterly basis under the guidance of the Private Investors Indices Committee.

1.2 Stock Market Indices

Learning Objective

8.1.3 Know the construction and weighting methods of the following indices: FTSE 100; FTSE All-Share Index; FTSE Actuaries UK Gilts Index Series; MSCI World Index; Dow Jones Industrial Average Index; S&P 500 Index; Nikkei 225; responsible and sustainable indices

As covered in chapter 3, stock market indices have the following uses:

- To act as a market barometer. Most equity indices provide a comprehensive record of historic price movements, thereby facilitating the assessment of trends. Plotted graphically, these price movements may be of particular interest to technical analysts (also known as chartists) and to momentum investors, by assisting the timing of security purchases and sales, or market timing.
- To assist in performance measurement. Most indices can be used as performance benchmarks, against which portfolio performance can be judged.
- To act as the basis for index tracker funds, exchange-traded funds (ETFs), index derivatives and other index-related products.
- To support portfolio management research and asset allocation decisions.

Also, as covered in section 3.7 of chapter 1, an index may be classified according to the method used to determine its price. The main index types are price-weighted, market capitalisation-weighted, equal-weighted and float-adjusted. Further, some indices are capped, while others also incorporate free float.

1 PIMFA, 2025. Indices. Retrieved from https://www.pimfa.co.uk/pimfa-indices/ (Accessed: June 2025)

1.2.1 FTSE 100 Index

The FTSE 100 Index is a market capitalisation-weighted index, representing the performance of the 100 largest UK-listed blue chip companies. It is free float-weighted to ensure that a true investable opportunity is represented within the index and screened for liquidity to ensure that the index is tradeable. Capital and total return versions are available. It is reviewed and its components rebalanced every quarter (March, June, September and December). The index represents approximately 80% of the UK's market capitalisation and is used as the basis for investment products, such as funds, derivatives and ETFs.

1.2.2 FTSE All-Share Index

The FTSE All-Share Index measures the performance of companies listed on the LSE's main market. It covers about 600 companies, representing approximately 98% of the UK's market capitalisation. It is a market capitalisation-weighted index and screened for size and liquidity. It is considered to be the best performance measure for the overall London equity market and is the basis for a wide range of investment-tracking products.

1.2.3 FTSE Actuaries UK Gilts Index Series

The FTSE also produces indices based on UK government securities. The indices are divided into conventional gilts and index-linked gilts and are also available in maturity bands. There is also a yield index that provides the term structure of the gilt market from one year up to 50 years.

1.2.4 MSCI World Index

The MSCI World index is a free float-adjusted, market capitalisation-weighted index that is designed to measure the equity market performance of developed markets. The index includes securities from over 20 developed market countries, is calculated on a capital or total return basis, and is quoted in US dollars among other currencies. It is the common benchmark index used for global funds.

1.2.5 Dow Jones Industrial Average (DJIA)

The DJIA was the first convenient benchmark for comparing individual stocks to the performance of the market and for comparing the market with other indicators of economic conditions.

The DJIA's 30 stocks account for close to 25% of the total US equity market. It was designed in the pre-computer era and is based on a simple price-weighted arithmetic calculation, making it less suitable for index products.

1.2.6 S&P 500 Index

The S&P 500 Index is regarded as the best indicator of the US equity markets. It focuses on the large cap segment of the US market and provides coverage of approximately 75% of US equities that trade on the NYSE and Nasdaq. It is a market capitalisation-weighted index that requires a free float of at least 50% and a minimum market capitalisation of US$4 billion. It is widely used as the basis for index products.

1.2.7 Nikkei 225 and Nikkei 400

The Nikkei 225 (also called the Nikkei Stock Average) is Japan's most widely watched index of stock market activity and is the oldest and most-watched Asian index. It is a price-weighted index that uses a similar methodology to the DJIA, but it is adjusted to integrate specific Japanese trading practices. The Nikkei 225 is designed to reflect the overall market, so there is no specific weighting of industries. The 225 components are among the most actively traded issues on the first section of the Tokyo Stock Exchange (TSE).

The Nikkei 400 is a relatively new index, launched in 2014, that aims to promote the appeal of Japanese companies to both domestic and foreign investors, while encouraging continued improvement of corporate value. It is a free float-adjusted, market capitalisation-weighted index of large-cap and mid-cap companies that meet requirements of global investment standards, such as efficient use of capital and investor-focused management perspectives. Constituents are screened and scored based on quantitative and qualitative factors such as return on equity (ROE), cumulative operating profit, and the appointment of independent directors.

1.2.8 Responsible, Sustainable and Ethical Indices

There are many different ethical, responsible and sustainable indices applying different screening processes, methodologies and formulae. Examples include:

- **FTSE4Good Index Series** – published by the FTSE Group, the series measures the performance of companies that meet globally recognised corporate responsibility standards. For example, the FTSE4Good UK Index is similar to the FTSE All-Share Index, in that it measures the performance of UK companies, but to be eligible for inclusion, companies must meet globally recognised corporate responsibility standards.
- **MSCI KLD 400 Social Index** – this is a socially screened version of the S&P 500 index. It comprises 400 companies (drawn from the universe of the 3,000 largest US public equities, as measured by float-adjusted market capitalisation) that meet certain environmental and social standards. It also excludes certain sectors including alcohol, tobacco and gambling.
- **S&P Dow Jones Sustainability Indices** – these are a series of indices that track the financial performance of the world's leading companies in terms of ESG criteria. Launched in 1999, the DJSI are the longest-running sustainability benchmarks worldwide, and today are, used for a wide range of ESG benchmarking and investment applications.
- **Dow Jones Islamic Market World Index** – this was the first index to measure the performance of a global universe of investable equities that comply with Shariah law. The DJIM has an independent Shariah supervisory board which advises on the methodology for screening securities for inclusion in the index and related matters relating to Shariah compliance of the eligible components.

2. Portfolio Measurement

Learning Objective

8.2.1 Analyse portfolio performance in terms of: absolute and relative return; absolute and relative risk; risk/reward ratios; contributions to return arising from asset allocation, currency movements, stock selection and timing; impact of new money and timing factors

2.1 Absolute and Relative Return

Absolute return is a measure of the gain or loss on a fund/portfolio expressed as a percentage of invested capital. Relative return is a measure of the return of a fund/portfolio, compared to a benchmark or other reference.

Advisers can apply a number of methods to analyse the performance of a fund/portfolio. This next section aims to offer some practical examples to assist you in carrying out this task for your clients. The effort involved in considering the performance of a large, diverse fund/portfolio may be considerable, and a number of tools are available which have been specially developed to assist with this task.

There are many data providers who offer performance statistics and risk measures for individual funds such as Morningstar, Lipper and Trustnet, among others. Whichever tool(s) you use, it is important to establish a process for reviewing each component within the fund/portfolio against its sector (or benchmark), and then relating the performance as a whole against its chosen benchmark, while also taking account of the movement of capital into and out of the portfolio.

Let us consider the various performance and volatility measures. In addition to the Sharpe ratio, Treynor ratio, information ratio, R-squared, alpha and beta (which we covered in chapter 3, sections 2.4 to 2.6), other measures include:

- **Volatility/three-year volatility** – three-year standard deviation is used to represent volatility and demonstrates a fund's propensity to rise/fall in value over a specified period of time. Standard deviation measures how far actual fund returns have deviated from the sector average. The more a fund's returns have varied from the sector average, the higher the volatility. The volatility of a fund is partly attributable to the assets in which it invests. For example, a fund that invests totally in equities is likely to have higher volatility than a fund solely invested in cash.
- **Maximum loss/maximum drawdown** – maximum loss (ML) is defined as the maximum loss possible under normal market conditions for a given time period, whereas maximum drawdown (Max DD or MDD) is the difference between the peak high and low values of an investment held over the time period since inception.

- **Hit rate** – a ratio that calculates the number of successful trades by dividing the difference in the number of winning and losing investments over a given period by the total number of stocks purchased. The hit rate can be used to compare the performance of two or more active managers, but it does not indicate which one has applied more skill in trading, only the fraction of the investments that have been sold at a profit.
- **Win/Loss ratio (also called the success ratio)** – this is used to calculate a fund manager's risk/reward ratio by dividing the number of winning investments by the number of losing ones. However, it does not take into account how much has been won or lost, only if they were winners or losers.

Armed with this understanding, we can now analyse the performance of a fund.

Example

Assume that a fund has generated the following returns:

	3 Months	6 Months	1 Year	3 Years	5 Years
Fund	8.1%	4.8%	-8.5%	-2.3%	27.7%
Peer group average	6.9%	2.3%	-3.1%	6.7%	33.9%

Alpha is -6.9% over one year and the R^2 figure is 0.70 over that period. What does this tell us?

- From these figures it appears that the fund manager takes an active approach as the fund's returns deviate meaningfully from the peer group average. In terms of performance, the data shows that the fund has underperformed the benchmark over one, three and five years. Over the one-year period specifically the fund has delivered lower-than-expected returns as reflected by the alpha of -6.9%.
- With an R^2 figure of over 0.70 over the one year period, the benchmark explains a significant portion of the fund's return variability, thus making it a reasonable (although not perfect) comparator.
- The nature of the underlying assets (eg, equities, bonds) and the fund's objective will impact whether it should be considered as a short-, medium- or long-term investment. In this case, given the performance trends, it may be aligned with a medium- to long-term strategy.

2.2 The Impact of Asset Allocation on the Returns Achieved by the Portfolio

Example

Using the table below, calculate the returns achieved by the following asset allocation models over three years.

Asset Allocation 1		Asset Allocation 2	
Cash	10%	Cash	5%
Fixed Interest	20%	Fixed Interest	15%
Commercial Property	30%	Commercial Property	50%
Equities	40%	Equities	30%

Asset Class	1-Year Return	3-Year Return
Cash	2%	7%
Fixed Interest	3%	10%
Commercial Property	4%	12%
Equities	5%	15%

Example

Armed with this understanding, we can now analyse the performance of a fund. Let us consider Fund XYZ, the performance data and the 1- and 3-year ratios for which are as follows.

Performance

	3 Months	6 Months	1 Year	3 Years	5 Years
Fund XYZ	8.1%	4.8%	-8.5%	-2.3%	37.7%
Benchmark	6.9%	2.3%	-3.1%	6.7%	33.9%

Ratio Information

	Year 1	Year 3
Volatility	11.9%	16.2%
Alpha	-6.9%	-2.7%
Beta	0.57	0.77
Sharpe	-0.02	-0.01
Info Ratio	0.38	-0.44
R^2	0.83	0.87

- **Volatility** – if we begin by considering the volatility measure, you can see that the returns achieved by the fund manager deviated from the sector average by some 11.85% over one year and 16.19% over three years.
- **Alpha** – in terms of alpha, it is clear that the fund underperformed the sector over one and three years (by 6.9 and 2.7 percentage points respectively).
- **Beta** – the beta measure shows that in climbing markets over one and three years, the fund would have produced a return lower than the index. In a declining market over the same period, the fund would have outperformed the index.
- **Sharpe** – over one and three years, the Sharpe ratio is almost zero, which indicates that the return on the portfolio is about equal to the risk-free rate on a risk-adjusted basis.
- **Information ratio** – the negative information ratio over one and three years implies that the fund manager's contribution in terms of skills and knowledge is low.
- **R^2** – this shows that 83% of the fund's performance over one year, and 87% over three years, was down to market movements.

Solution

Asset Allocation 1	
Cash	10% x 7% = 0.70%
Fixed Interest	20% x 10% = 2.00%
Commercial Property	30% x 12% = 3.60%
Equities	40% x 15% = 6.00%
Total Return	12.30%

Asset Allocation 2	
Cash	5% x 7% = 0.35%
Fixed Interest	15% x 10% = 1.50%
Commercial Property	50% x 12% = 6.00%
Equities	30% x 15% = 4.50%
Total Return	12.35%

As you can see in this example, increasing the portfolio exposure to equities and commercial property by a further 10 percentage points has only improved the return by 0.05 percentage points.

2.3 The Impact of Currency Movements

Currency fluctuations can have a dramatic impact on investment returns.

Example

Exchange rate at date of investment:		£1.00 – $1.50
Amount invested:		£20,000
Price per unit:		$2.00
Number of units purchased:		15,000
Exchange rate of date of valuation:		£1.00 – $1.90
Price per unit:		$2.50
$ Proceeds:	**15,000 x $2.50**	**$37,500**
£ Proceeds:	**$37,500 / $1.90**	**£19,737**

Although the underlying unit price has increased 25%, the decline of the dollar against sterling has meant that the client is left with a loss of £263 (£20,000 – £19,737).

The following is a useful equation that can be used to work out the holding period return (HPR) to a domestic base currency when an investment is made overseas. Note the equation takes into account the gain (or loss) made on the currency exchange and the gain (or loss) made on the foreign investment.

$$1 + R_d = (1 + R_v)(1 + R_{fx})$$

where:

R_d = the holding period return (annualised) to an investor in a domestic base
R_v = the holding period return gained on the investment made overseas
R_{fx} = the holding period return gained on the currency exchange

Thus:

$$R_d = (1 + R_v)(1 + R_{fx}) - 1$$

1. In the example above, the UK investor has £20,000 to invest. The investor converts this amount of domestic cash into foreign currency (US dollars) and now has $30,000 (ignoring the bid/offer spread and commissions).
2. This is invested in US shares, priced at $2.00 per share, (ie, 15,000 US shares are purchased).
3. After one year, the investor sells the shares at $2.50 per share, and receives $37,500 in return (ie, 15,000 shares x $2.50).
4. The dollar investment is converted to sterling at $1.90/£1, so the investor receives £19,737 (ie, $37,500 / $1.90).
5. The HPR gained on the investment made overseas, R_f, is 25% (ie, ($2.50 – $2.00) / $2.00).
6. The currency has moved down from $1.50/£1 (or £1/$1.50 = £0.67/$1) to $1.90/£1 (or £1/$1.90 = £0.53/$1). Thus, the HPR gained on the currency exchange, R_{fx}, is -21% (ie, (0.53 – 0.67) / 0.67).
7. The HPR in sterling, R_d, is a 1.25% loss (ie, (1 + 0.25)(1 + (-0.21)) –1). In monetary terms, this is a loss of £250 (ie, 1.25% x £20,000).

2.4 What Does Risk/Reward Ratio Mean?

Risk/reward is a ratio used by many investors to compare the expected returns of an investment to the risk taken. Essentially, an inverse of this ratio (ie, reward/risk) is more common as a rule of thumb and is used by many traders to pick profitable trades. A 2:1 or a 3:1 reward ratio is considered an attractive proposition by some traders and may be justification to enter into a deal.

Every deal involves an element of risk and the trade may result in a loss. Hence, the maximum downside loss possible is calculated first and then the trader determines the expected profit. This ratio may also be calculated mathematically as:

$$\text{Reward/risk ratio} = \text{Expected profit / Possible loss}$$

Example

A trader wishes to buy 100 shares of Topbuy plc at 250 yuan each. They will put a stop loss order at 150 yuan if the price drops unexpectedly over their holding period. Hence, their maximum loss will be 100 yuan per share.

On the upside, the trader's view is that prices will rise to 500 yuan, but they will actually take profits if prices move up to 450 yuan: an expected profit of 200 yuan.

Risk/reward ratio = 100 / 200 = 0.5.

Alternatively, their reward/risk ratio is: 200 / 100 = 2:1.

Many traders may decide to screen off trading opportunities offering a minimum of 2:1 reward ratio over their holding period.

2.5 Performance Measures for Including New Money and Timing Factors

In a performance measurement context, a suitable metric needs to take into account any money that is entering or leaving an investment over its investment period. The Time-Weighted Rate of Return (TWRR) takes account of any new money and the timing of cash flows into and out of an investment.

As we saw in section 2.4.4 of chapter 3, the TWRR accurately reflects the compound growth over a stated investment period of one unit of money initially invested into an account. Its calculation requires the account to be revalued every time an external cash flow occurs. Further, the GIPS generally require that TWRR methodology is adopted by firms to calculate the performance of their portfolios.

The new money and timing aspect can best be demonstrated with the following example.

Example

SII Asset Management manages institutional and individual accounts, including the account of the Thapar family. The Thapar account was initially valued at €1,000,000 at the start of month A.

The account received two cash flows during month A:

- On day 5 of this month, the opening value of the investments in the Thapar account was €1,015,000; a contribution of €30,000 was made later that day.
- On day 16, the opening value was €1,040,000; again, later that day, another contribution was made, this time for €20,000

The fund was valued at €1,080,000 at the end of the month. Determine the performance of this account.

The TWRR methodology is to determine the sub-period returns first and then to chain-link them to determine the cumulative wealth relative for the full one-month period.

Sub-period return calculations:

1–5 days return: $\frac{(1{,}015{,}000 - 1{,}000{,}000)}{(1{,}000{,}000)} = 0.015 \text{ or } 1.5\%$

6–16 days return: $\frac{(1{,}040{,}000 - 1{,}045{,}000)}{(1{,}045{,}000)} = -0.0048 \text{ or } -0.48\%$

(where the figure of €1,045,000 includes the contribution of €30,000 on day 5).

17–30 days return: $\frac{(1{,}080{,}000 - 1{,}060{,}000)}{(1{,}060{,}000)} = 0.0189 \text{ or } 1.89\%$

(where the figure of €1,060,000 includes the contribution of €20,000 made on day 16).

The three sub-period returns are now converted into wealth return relatives and then chain-linked to determine the final wealth return (the TWRR) over the one-month period, as follows:

$$\text{TWRR} = \left[(1 + 0.015)(1 + (-0.0048))(1 + 0.0189)\right] - 1 = 0.0292 \text{ or } 2.92\%$$

3. Portfolio Review

Learning Objective

8.3.1 Understand the importance of regularly reviewing the client's portfolio

8.3.2 Apply measures to address the factors that require attention as part of the portfolio review and administration process: changes in client circumstances; changes in the financial environment; new products and services available; administrative changes or difficulties; investment-related changes (eg, credit rating, corporate actions); portfolio rebalancing; benchmark review

3.1 The Importance of Portfolio Reviews

It is important to ensure that the management of a client's portfolio is reviewed regularly. The frequency of review should be agreed with the client and should take into account any changes in the client's circumstances or requirements. For example, the portfolio may have been initially created to generate a capital return, while the client may now require a regular income.

Changes in the performance of the underlying assets may also require a rebalancing of the asset allocation. For example, the outperformance of an equity holding, compared with the other assets (eg, bonds) may alter the risk profile of the overall portfolio.

Various portfolio balancing techniques can be employed to ensure that the asset allocation is adjusted to remain in line with what was originally agreed. Regular reviews are also necessary for the purposes of calculating performance and reporting to the client, including the calculation of any performance-related fees.

3.2 Factors Requiring Review

3.2.1 Changes in Client Circumstances

Changes in the client's personal circumstances (eg, loss of job, retirement, receiving an inheritance or winning the lottery) can have a bearing on the structure of the portfolio and will require a review. For example, the client may now have a requirement for regular income instead of growth, a lower or higher tolerance for risk, or they may have access to a lump sum to assist with an unplanned expense. When creating a portfolio, it is important to consider the client's requirements and ensure that some tolerance is built in to cope with unforeseen events (ie, ensuring that some capital remains accessible for emergencies).

3.2.2 Changes in the Financial Environment

Economic changes can impact the portfolio. Thus, in the event of any such changes, the portfolio will require a review to assess their impact and determine a strategy for minimising their impact.

Examples include a change to tax laws and rates of taxation of gains or income generated from within an investment portfolio (including amendments to legislation surrounding certain investment vehicles such as pensions; and ISAs, EISs and SEISs in the UK).

3.2.3 New Products and Services

The introduction of new products on to the market, as well as the creation of new investment strategies, can also require a review due to improved charging structures or additional features and benefits that were not offered by the original contract.

3.2.4 Administrative Changes or Difficulties

If the ongoing management of the portfolio is proving difficult due to issues dealing with a particular platform, technology or provider (which is proving detrimental to the efficient and timely dealing), then a review may be appropriate.

3.2.5 Investment-Related Changes

Changes to the underlying holdings within a portfolio (eg, due to a change in credit rating or a corporate action) should trigger a review of the portfolio, to ensure that the level of overall exposure to that particular stock has not been altered significantly.

3.3 Portfolio Rebalancing

As we saw in chapter 7, section 5.3.2, portfolio rebalancing relates to adjustments in the levels of exposure to the various asset classes. These adjustments should be reviewed during scheduled portfolio reviews, or sooner if shifts in the economic cycle suggest that certain asset classes require increased or reduced exposure.

3.4 Benchmark Review

A review of the benchmark may be required if it is no longer representative of the portfolio objective or contains assets to which the portfolio no longer has exposure, or if the benchmark in question is no longer (or is due to stop) being calculated.

If a portfolio manager wishes to change the benchmark against which performance is assessed, they should inform the client of the change along with the rationale for this change and the date from which it will take effect. This will demonstrate to the client that the manager has not simply chosen the new benchmark to provide a more favourable comparison.

3.5 The Portfolio Review Process

In practice, the adviser should ensure that they have a strict administrative process in place to ensure that the portfolio is reviewed, both at the agreed anniversary dates and during the interim period when any changes occur.

Ensuring reviews are carried out at the agreed points during the year is relatively straightforward and requires nothing more than a simple diary system that is made available to the adviser and their support team. This should be checked frequently, and a list of forthcoming reviews for the next time period shared with the team.

Capturing changes to the client's circumstances is a different matter. Some individuals like to keep their adviser informed and will contact them as and when changes occur, or are anticipated. Indeed, part of the adviser's job should be to encourage this form of regular communication or information-sharing. For those clients who are less forthcoming, the adviser should take steps to incorporate a regular communication (eg, email or phone call) into their diary to ensure that any changes or developments in the client's personal circumstances are known.

The adviser may also consider preparing a cut-down version of a fact find as a review questionnaire to send to the client in advance of the next review, which can incorporate changes to income/expenditure, employment, personal status, assets/liabilities and revised/new financial objectives. The completion of such a questionnaire can then be used to set the agenda for the next review meeting and means the adviser is prepared to discuss in outline what changes they feel may need to be made.

In terms of reviewing the investment portfolio, the adviser will need to consider how to ensure that changes to the following areas are captured, then communicated to the investor and acted upon:

- Asset allocation changes.
- Corporate actions (eg, rights issues).
- Recommended fund switches (if advisory).

Changes to the client's personal circumstances may also require the input of other professionals, such as solicitors or accountants. Most firms have links with firms to whom they are happy to refer their clients for advice on matters relating to divorce, starting a new business or selling an existing business, among other matters. If these links are not already in place, then it makes good business sense to arrange them and ensure that their clients are aware of these additional services.

Key Chapter Points

- There are three main types of market index: price-weighted, market capitalisation weighted (or market cap-weighted, or market value-weighted) and equal-weighted (or unweighted). Indices can also be capped or free float adjusted.
- An absolute return is simply a measure of the gain or loss on an investment portfolio expressed as a percentage of invested capital.
- Relative return is a measure of the return of an investment portfolio, compared to a benchmark or other reference.
- Risk/reward is used by many investors to compare the expected returns of an investment to the risk taken. The inverse (ie, reward/risk) is used by many traders to pick profitable trades.
- Regular portfolio reviews are necessary for the purposes of calculating performance and reporting to the client, including the calculation of any performance-related fees.
- Factors requiring a review include a change in the client's circumstances, changes in the financial environment, new products and services, and investment-related changes.

End of Chapter Questions

Think of an answer for each question and refer to the appropriate workbook section for confirmation.

1. **For what three reasons are performance benchmarks important?**
   Answer reference: Section 1.1

2. **What need do GIPS meet?**
   Answer reference: Section 1.1.1

3. **In what circumstances would a portfolio use a peer group average, rather than an established index, to benchmark performance?**
   Answer reference: Section 1.1.2

4. **Explain what is meant by relative return.**
   Answer reference: Section 2.1

5. **Explain the term 'maximum drawdown'.**
   Answer reference: Section 2.1

6. **An investor's portfolio provides a holding period return (HPR) of 25% in foreign currency terms. If the HPR gained on the currency exchange is -10% over the period, what is the HPR in domestic currency terms?**
   Answer reference: Section 2.3

7. **What ratio is used to compare the expected returns on an investment with the level of risk taken?**
   Answer reference: Section 2.4

8. **How frequently should the management of a client's portfolio be reviewed?**
   Answer reference: Section 3.1

9. **Give three factors that would lead to a client's portfolio requiring a review.**
   Answer reference: Section 3.2

10. **In what circumstances may a review of the portfolio benchmark be required?**
    Answer reference: Section 3.4

Glossary

Active Management

A type of investment approach employed to generate returns in excess of a benchmark index. Active investors utilise fundamental analysis and/or technical analysis to assist in the forecasting of future events, and the timing of purchases and sales of securities.

AIM

The London Stock Exchange's (LSE's) market that is designed to help smaller UK public limited companies (plcs), formerly called the Alternative Investment Market. AIM has less demanding admission requirements and places less onerous continuing obligation requirements upon those companies admitted to the market than those applying for a full listing on the LSE.

Alpha

The return from a security or a portfolio in excess of a risk-adjusted benchmark return.

Annual Equivalent Rate (AER)

A notional rate that is quoted on the interest paid on savings and investments.

Arbitrage

The process of deriving a risk-free profit from simultaneously buying and selling the same asset in two different markets, where a price difference between the two exists.

Asset Allocation

The process of deciding on the division of assets in an investment portfolio according to an investor's financial goals, risk tolerance and investment time horizon.

Association of British Insurers (ABI)

A trade association that represents the collective interests of the UK's insurance industry.

Auction

A system used to issue securities where the successful applicants pay the price that they bid. Examples of its use include the UK Debt Management Office (DMO) when it issues gilts. Auctions are also used by the London Stock Exchange (LSE) to establish prices, such as opening and closing options on SETS.

Authorised Corporate Director (ACD)

Fund manager for an open-ended investment company (OEIC).

Bank of England (BoE)

The central bank for the UK. Also referred to as 'the Bank'.

Bear Market

A persistent downward trend in share prices.

Behavioural Finance

A field of study that examines how psychological factors and cognitive biases influence investors' financial decisions and market outcomes.

Beneficiaries

The beneficial owners of property, such as those held in a trust, will or life insurance policy.

Beta

The relationship between the returns on a stock and returns on the market. Beta is a measure of the systematic risk of a security or a portfolio in comparison to the market as a whole.

Bid Price

Bond and share prices are quoted as bid and offer. The bid is the lower of the two prices and is the one that investors receive when they sell their units/shares.

Bid/Offer Spread

The difference between the bid and offer prices. Also known as the bid/ask spread.

Blue Bonds

Similar to conventional debt instruments, but the funds raised are used exclusively to finance or refinance (in part or in full) eligible 'blue' (ie, marine- and ocean-based) projects.

Bonus Issue

The free issue of new ordinary shares to a company's ordinary shareholders, in proportion to their existing shareholdings through the conversion, or capitalisation, of the company's reserves. By proportionately reducing the market value of each existing share, a bonus issue makes the shares more marketable. Also known as a capitalisation issue or scrip issue.

Bull Market

A situation of persistently rising share prices.

Call Option

An option that gives the buyer the right, but not the obligation, to buy an underlying asset.

Capital Asset Pricing Model (CAPM)

A multi-factor model that expresses a simple relationship between risk and return. It indicates the expected return from holding an asset, based on a risk-free rate of return plus a risk premium.

Capital Gains Tax (CGT)

A tax on changeable gains above an annual allowance made when a chargeable asset is disposed of.

Central Bank

Central banks typically have responsibility for setting a country's or a region's short-term interest rate, controlling the money supply, acting as banker and lender of last resort to the banking system and managing the national debt.

Clean Price

The quoted price of a bond. The clean price excludes accrued interest to be added or to be deducted, as appropriate.

Closed-Ended Fund

Organisations such as companies which are a fixed size as determined by their share capital. Commonly used to distinguish investment trusts (closed-ended) from unit trusts and OEICs (open-ended).

Commodity

Items including sugar, wheat, oil and copper. Derivatives of commodities are traded on-exchanges (eg, oil futures on ICE Futures).

Consumer Price Index (CPI)

Index that measures the movement of prices faced by a typical consumer. Known as the Harmonised Index of Consumer Prices (HICP) in the euro area.

Convertible Bond

A bond which can be converted, usually at the investor's choice, into a certain number of the issuing company's shares.

Correlation

The extent to which the values of different types of investments move in tandem with one another in response to changing economic and market conditions.

Counterparty Risk

The risk that a counterparty in a transaction cannot honour its contractual obligations. Also referred to as credit risk or default risk.

Coupon

The regular amount of interest paid on a bond.

Cum-Dividend (cum-div)

The period during which the purchase of shares or bonds (on which a dividend or coupon payment has been declared) entitles the new holder to this next dividend or interest payment.

Current Account

Measures flows in relation to trade in goods and services, income from investment and compensation of employees and current transfers (eg, private sector gifts to people overseas, or government aid to abroad).

Derivatives

Instruments where the price or value is derived from an underlying asset or benchmark. Examples include options, futures and swaps.

Dirty Price

The price of a bond including any accrued interest.

Diversification

Investment strategy that involves spreading risk by investing in a range of investments.

Dividend

Distribution of profits by a company to shareholders.

Dividend Allowance (DA)

An amount up to which an individual does not have to pay tax on dividends.

Dividend Yield

A dividend expressed as a percentage of the current share price.

Duration

A measure that can be used to estimate the price sensitivity of a bond to small changes in interest rates. The simplest measure for duration is called the Macaulay duration.

Enterprise Investment Scheme (EIS)

A scheme designed to help smaller, higher-risk trading companies to raise finance, by offering a range of tax reliefs to investors who purchase new shares in those companies.

Environmental, Social & Governance (ESG)

A specific investment approach that seeks to incorporate environmental, social justice, and corporate governance factors.

Equities

Another name for the ordinary shares of a company.

Ethical Investing

The practice of selecting investments based on ethical or moral principles. This can include filtering out unethical companies involved in the 'sin stocks', while also supporting ethical companies that are making a positive contribution through their products and services.

Eurobond

An interest-bearing security issued internationally. More strictly, a eurobond is an international bond issue denominated in a currency different from that of the financial centre(s) in which it is issued. Most eurobonds are issued in bearer form through bank syndicates.

Exchange Rate

The rate at which one currency can be exchanged for another.

Exchange-Traded Funds (ETFs)

These are a type of open-ended investment fund that are listed and traded on a stock exchange. They typically track the performance of an index and trade very close to their net asset value (NAV).

Ex-Dividend (xd)

The period during which the purchase of shares or bonds (on which a dividend or interest payment has been declared) does not entitle the new holder to this next dividend or interest payment.

Financial Conduct Authority (FCA)

One of the two regulators of the financial services sector in the UK. The FCA is the conduct regulator over financial firms and is also the prudential supervisor of those not regulated by the Prudential Regulation Authority (PRA).

Financial Ombudsman Service (FOS)

A governing body responsible for receiving and investigating complaints against authorised persons, if they cannot be satisfactorily resolved between the two parties directly.

Financial Services & Markets Act (FSMA) 2000

UK legislation that, most notably, created the Financial Services Authority (FSA) and Financial Ombudsman Service (FOS). It was amended by the Financial Services Act (FSA) 2012 which, among other changes, replaced the FSA with the Financial Conduct Authority (FCA) and Prudential Regulation Authority (PRA).

Financial Services Compensation Scheme (FSCS)

The FSCS deals with all claims against authorised firms and is an independent body set up under the Financial Services and Markets Act (FSMA) 2000. For instance, if a UK deposit taker fails, the depositor will have recourse to the FSCS.

Floating Rate Notes (FRNs)

Debt securities issued with a coupon periodically referenced to a benchmark interest rate.

FTSE 100

The main UK share index of the 100 largest listed company shares measured by market capitalisation. Also referred to as the 'footsie'.

FTSE All-Share Index

An index representing approximately 98% of UK listed shares by value.

Fundamental Analysis

The calculation and interpretation of yields, ratios and discounted cash flows (DCFs) that seek to establish the intrinsic value of a security or the correct valuation of the broader market.

Fund Manager

A firm or person that makes investment decisions on behalf of clients.

Future

An agreement to buy or sell an item at a future date, at a price agreed today. Differs from a forward in that it is a standardised contract traded on an exchange.

Gearing

The financial ratio of a company's long-term debt to its equity capital. Also known as 'financial leverage'.

Green Bonds

Similar to conventional debt instruments, but the funds raised are used exclusively to finance or refinance (in part or in full) eligible 'green' projects with positive environmental or climate benefits.

Gross Domestic Product (GDP)

A measure of a country's output. In other words, the monetary value of all finished goods and services made within a country in a specific time period.

Gross National Product (GNP)

The sum of gross domestic product plus net property income from abroad.

Gross Redemption Yield (GRY)

The annual compound return from holding a bond to maturity, taking into account both interest payments and any capital gain or loss at maturity. It is the internal rate of return on the bond based on its trading price.

Hard Landing

The situation in which an economy undergoes a rapid transition, from a period of growth to slow or flat growth, often preceding a recession. It is characterised by a pronounced contraction of economic activity, resulting in significant negative consequences such as increased unemployment and reduced consumer spending.

Hedging

A technique employed to reduce the impact of adverse price movements on financial assets held.

Income Tax

A tax paid on earnings.

Index-Linked Gilts

Gilts whose principal and interest payments are linked to the retail price index (RPI).

Individual Savings Accounts (ISAs)

Savings vehicles that allow individuals to hold assets free of tax on dividends, interest and capital gains.

Inflation

A measure of the general rise in prices in an economy.

Information Ratio

Compares the excess return achieved by a fund over a benchmark portfolio to the fund's tracking error.

Initial Public Offering (IPO)

A new issue of ordinary shares that sees the company gain a stock market listing for the first time, whether made by an offer for sale, an offer for subscription or a placing.

Investment Trust

Despite the name, an investment trust is a company, not a trust. A type of closed-ended fund, they invest in a diversified range of investments and are normally listed on a stock exchange.

Leveraged Buyouts (LBOs)

A common investment strategy in private equity. LBOs involve a financial sponsor agreeing to an acquisition without itself committing all the capital required for the acquisition.

Listing

Companies whose securities are listed are available to be traded on an exchange.

Liquidity

The ease and speed with which an asset is turned into cash at the prevailing market price.

London Stock Exchange (LSE)

The main UK market for securities.

Market Capitalisation

The total number of shares it has in issue, multiplied by its current share price. Also called 'market cap'.

Maturity

The date on which the principal on a bond is repaid.

M0

The narrowest definition of money. It covers notes and coins in circulation outside the Bank of England (BoE), plus operational deposits at the BoE.

M4

The broadest definition of money. It includes notes and coins in circulation with the public, plus sterling deposits held with UK banks and building societies by the rest of the private sector.

Nasdaq

The second-largest stock exchange in the US. Nasdaq lists certain US and international stocks and provides a screen-based quote-driven secondary market that links buyers and sellers worldwide. Nasdaq tends to specialise in the shares of technology companies.

National Insurance Contributions (NICs)

Deductions from earned income that help individuals build entitlement to certain social security benefits, including the state pension.

Negative Screening

A screening process that deliberately excludes companies and sectors involved in 'undesirable' activities, products or services.

Net Assets

The total of a company's assets less the total of its liabilities.

Nil Rate Band (NRB)

An amount up to which an estate has no inheritance tax to pay.

Nominal Value (NV)

The amount on a bond that will be repaid on maturity. Also known as face or par value. Also applied to shares in some jurisdictions and representing the minimum that the shares are issued for.

Off-Exchange

Refers to financial instruments traded directly between parties rather than through a centralised exchange. Also called 'over-the-counter (OTC)'.

Offer Price

Bond and share prices are quoted as bid and offer. The offer is the higher of the two prices and is the one that is paid by a buyer. Also called the ask price.

On-Exchange

Refers to financial instruments traded on a centralised exchange, where prices are publicly quoted and transactions are standardised. Also called 'exchange-traded'.

Open-Ended Fund

Type of investment, such as open-ended investment companies (OEICs) or unit trusts, which can expand without limit.

Open-Ended Investment Company (OEIC)

A collective investment vehicle similar to a unit trust. Alternatively described as an ICVC (investment company with variable capital).

Option

A derivative giving the buyer the right, but not the obligation, to buy or sell an asset in the future.

Organisation for Economic Co-operation and Development (OECD)

An international organisation that works on establishing evidence-based international standards and finding solutions to a range of social, economic and environmental challenges.

Paris Agreement

The first-ever legally binding climate change agreement on all countries of the international community, aiming to limit global temperature increases to 1.5°C (and well below 2°C) of pre-industrial levels. Also called COP21 (short for the 21st Conference of the Parties) or the 2015 Paris Climate Conference.

Passive Management

A type of investment approach which necessitates the construction of a portfolio to track, or mimic, the performance of a recognised index.

Personal Savings Allowance (PSA)

The amount up to which an individual may earn savings free from income tax.

Positive Screening

A screening process that seeks to support firms providing positive solutions to challenges such as climate change and social justice.

Preference Share

Shares which usually pay fixed dividends but do not have voting rights. Preference shares have preference over ordinary shares in relation to the payment of dividends and in default situations.

Prudential Regulation Authority (PRA)

One of the two regulators of the financial services sector in the UK. The PRA is part of the Bank of England (BoE) and carries the prudential regulatory powers over financial firms such as banks, building societies, investment and insurance companies.

Public Sector Net Cash Requirement (PSNCR)

The amount borrowed annually by the UK government, also referred to as the budget deficit. It is equal to the sum of the central government net cash requirement (CGNCR), the local government net cash requirement (LGNCR) and the public corporations net cash requirement (PCNCR).

Put Option

An option that gives the buyer the right, but not the obligation, to sell an underlying asset.

Real Estate Investment Trust (REIT)

An investment trust that specialises in investing in property.

Recession

A period of declining economic performance, broadly defined as two consecutive quarters of negative gross domestic product (GDP) growth.

Redemption

The repayment of principal to the holder of a redeemable security.

Residence Nil Rate Band (RNRB)

An additional nil rate band (NRB) that is available when an individual, on death, passes on residential property to their direct descendants.

Retail Price Index (RPI)

Index that measures the movement of prices faced by retail consumers in the UK.

Rights Issue

The issue of new ordinary shares to a company's shareholders in proportion to each shareholder's existing holding. The issue is made in accordance with the shareholders' pre-emptive rights and the new shares are usually offered at a discounted price to that prevailing in the market. This means that the rights have a value and can be traded 'nil paid'.

Rollover

The process of extending settlement or expiration of a financial position by closing the existing contract and opening a new one.

R-Squared/R^2

A measure of the percentage of a fund's movements that can be accounted for by changes in its benchmark index.

Running Yield

The annual income received on a bond expressed as a percentage of its current market price. Also known as the 'interest yield'.

Seed Enterprise Investment Scheme (SEIS)

Predominantly designed to stimulate entrepreneurship and to help small, early-stage companies to raise equity finance.

Senior Managers & Certification Regime (SMCR or SM&CR)

A regime that aims to increase individual accountability. The rules are intended to make it easier for firms and regulators to be clear about who is responsible for what and to hold senior managers to account where they are at fault for misconduct that falls within their area of responsibility.

Soft Landing

The situation in which a central bank is able to bring down inflation and cool an overheating economy, without setting off a significant decline in economic activity.

Stamp Duty

The tax payable on the purchase or transfer of paper-based stocks.

Stamp Duty Land Tax (SDLT)

The tax payable by the purchaser on purchases of land and property in the UK for most residential property.

Stamp Duty Reserve Tax (SDRT)

The tax payable on the purchase or transfer of stocks effected electronically.

Standard Deviation

Measures the average return made on it over a period of time by showing the degree to which its price fluctuates in relation to its mean return.

Stock Exchange Electronic Trading System (SETS)

The single platform, with an electronic order book, trading constituents of the FTSE All-Share Index, exchange-traded funds (ETFs) and exchange-traded commodities, along with over 150 of the most traded AIM and Irish securities.

Stop Loss

An order placed to sell a security when it reaches a predetermined price thereby limiting an investor's potential loss.

Sukuk

Instruments of equal value representing a common share in the ownership of an underlying asset that comply with Shariah law.

Systematic Risk

Market risks that affect the overall market that cannot be diversified away. Also called 'undiversifiable risk' or 'market risk'.

Systemic Risk

The risk of collapse of an entire financial system or entire market, rather than simply the failure of individual parts.

Treasury Bills (T-bills)

Short-term (often three months) borrowings of the government. Issued at a discount to the nominal value at which they will mature. Traded in-the-money market.

T+2

A two-day rolling settlement period. It is a standard settlement period for many international equity markets.

Unit Trust

A vehicle whereby money from investors is pooled together and invested collectively on their behalf. Unit trusts are open-ended vehicles.

United Nations (UN) Sustainable Development Goals (SDGs)

Universal goals and targets that involve addressing a range of global challenges and, importantly, ensuring that all are achieved by 2030. The UN defines its SDGs as *'the blueprint to achieve a better and more sustainable future for all'*.

Unsystematic Risk

The risks associated with a specific stock that can be diversified away by increasing the number of stocks in a portfolio. Also called specific risk or diversifiable risk.

Venture Capital Trusts (VCTs)

Companies listed on the London Stock Exchange (LSE) that are similar to investment trusts. They are designed to enable individuals to invest indirectly in a range of small higher-risk trading companies whose shares and securities are not listed on a recognised stock exchange.

Yield

Income from an investment expressed as a percentage of the current price.

Yield Curve

The depiction of the relationship between the yields and the maturity of bonds of the same type.

Zero Coupon Bonds (ZCBs)

Bonds that do not pay a coupon. Instead, they are issued at a discount to their face value and redeemed at par on a pre-specified future date.

Multiple Choice Questions

1. **A client holds an investment portfolio covering a number of different equities. The client is concerned about the following risks:**

Risk 1	–	The risk that inflation will fall sharply
Risk 2	–	The risk that the UK pound will fall significantly against the US dollar
Risk 3	–	The risk that the pharmaceutical industry will sharply decline
Risk 4	–	The risk that a particular company's management team will perform poorly

Which of the following statements is true?

A. Only Risks 1 and 2 can be mitigated by using pound cost averaging
B. Only Risks 2 and 3 can be mitigated by using the efficient market hypothesis
C. Only Risks 3 and 4 are likely to reduce by using diversification strategies
D. Only Risks 1 and 4 are likely to reduce by using hedging strategies

2. **Four investors, holding different shares, benefit from a rights issue, as shown in the following table:**

Investor	Shares Held	Current Market Price	Rights Issue Ratio	Rights Issue Share Price
A	48	220p	1:3	190p
B	48	225p	1:4	180p
C	48	230p	1:3	170p
D	48	235p	1:4	160p

Which investor will end up with the highest theoretical ex-rights share price?

A. Investor A
B. Investor B
C. Investor C
D. Investor D

3. **Your client is aged 37, has a balanced attitude to risk and wishes to invest for long-term capital growth. Based on the following portfolio, which course of action would you recommend?**

Cash	75,000
Fixed-interest securities	95,000
Equities	30,000
Total	200,000

A. Leave the portfolio unchanged
B. Reduce the fixed-interest securities and increase cash
C. Reduce cash and invest in fixed-interest securities
D. Reduce cash and increase equities

4. The time value of money is used to calculate which of the following?

A. The period an investment will be held for
B. The amount needed now to produce a future sum
C. The impact of inflation on a published interest rate
D. The annual percentage rate on an account

5. The asset allocation of Fund A is 60% equities and 40% bonds, and of Fund B is 30% equities and 70% bonds. If equities have provided a three-year return of 12% and bonds of 8%, by how much has the higher equity allocation benefitted Fund A over Fund B?

A. 1.2 percentage points
B. 0.8 percentage points
C. 0.4 percentage points
D. 0.2 percentage points

6. During the course of a typical economic cycle, an investment manager made several strategic switches. Assuming these switches were theoretically sound, which one occurred at the end of the bull market, and the beginning of a bear market?

Switch A – Interest rate-sensitive equities to cyclical stocks
Switch B – Cash to emerging market equities
Switch C – Investment grade corporate bonds to 'safe haven' government bonds
Switch D – Defensive dividend stocks to interest rate-sensitive equities

7. An investor has a portfolio of government bonds, the weighted average maturity of which is over ten years. Which of the following is the investor least likely to hold?

A. German Bunds
B. French BTFs
C. US T-bonds
D. Japanese government bonds

8. A client's account was initially set up with $500,000 at the start of month 1. On day 10 of this month, the opening value of the investments was $530,000; and later that day, the client added $20,000 to their account. The account was valued at $580,000 at the end of the month. Using the methodology for time-weighted rate of return, what is the performance of the account?

A. 5.45%
B. 6.00%
C. 11.78%
D. 16.00%

9. Denise has a one-year fixed rate bond with her high street bank and Kimberly has a two-year fixed rate bond, at the same annual rate as Denise, with her local building society. When comparing the risks associated with these investments:

A. Denise has a greater capital risk exposure than Kimberly
B. Denise has a lower inflation risk exposure than Kimberly
C. Denise and Kimberly have the same interest rate risk exposure
D. Denise and Kimberly have both mitigated their operational risk exposure

10. When considering the criteria to be used for the investment strategy under a life office's new responsible and sustainable fund, the following selection criteria were discussed:

Criteria 1 – Corporate governance
Criteria 2 – Genetic engineering
Criteria 3 – Supply-chain practices
Criteria 4 – Tropical hardwood

Which of the following statements is true?

A. Criteria 1 and 4 are normally designed to operate as methods of positive screening
B. Criteria 2 and 4 are normally designed to operate as methods of negative screening
C. Only Criteria 1 and 2 are examples of corporate social responsibility (CSR)
D. Only Criteria 2 and 3 are examples of global reporting initiatives

11. An individual purchases a UK residential property which is subject to the standard rates of stamp duty land tax (SDLT). If they pay a purchase price of £750,000, what amount of SDLT will they pay?

A. £27,500
B. £30,000
C. £31,250
D. £37,500

12. An investment analyst is using a number of indices as performance benchmarks:

Index 1 – Nikkei 225 Index

Index 2 – S&P 500 Index

Index 3 – MSCI World Index

Index 4 – Dow Jones Industrial Average Index

Which of the following statements is true?

A. Only Index 1 is market capitalisation-weighted
B. Only Index 4 is equal-weighted
C. Only Indices 1 and 2 are price-weighted
D. Only Indices 2 and 3 are market capitalisation-weighted

13. Four UK-resident clients recently disposed of a property at a significant capital gain. Which client would have incurred a liability to CGT of 24%?

A. A basic rate taxpayer, where the property was their main home
B. A basic rate taxpayer, where the property was their holiday home
C. A higher rate taxpayer, where the property was their main home
D. An additional rate taxpayer, where the property was their holiday home

14. A governance analyst identified four significant national statistics based on a six-month review period:

Fact 1 – A 5% increase in income from overseas investment

Fact 2 – A 3% decrease in the value of M0

Fact 3 – A 2% decrease in the value of exported goods

Fact 4 – A 1% increase in foreign currency borrowing

When considering the UK balance of payments, which of the following statements is true?

A. Only Facts 1 and 2 will reduce an overall deficit
B. Only Facts 1 and 3 will affect the current account
C. Only Facts 2 and 3 will reduce an overall surplus
D. Only Facts 2 and 4 will affect the capital account

15. A trader currently holds four options:

Option	Type	Premium	Strike Price	Current Price of Underlying Asset
1	Call	6p	123p	125p
2	Call	8p	190p	188p
3	Put	4p	140p	141p
4	Put	5p	170p	142p

Which of these options is currently in-the-money?

A. Options 1 and 2
B. Options 1 and 4
C. Options 2 and 3
D. Options 2 and 4

16. An investor incurred a range of charges across their portfolio of collective investments:

Charge 1 was a preliminary charge of £62
Charge 2 was a dilution levy of £18
Charge 3 was a performance fee of £620
Charge 4 was an annual management charge of 0.75%

Which of the following statements is true?

A. Only Charge 1 is normally described as a back-end load
B. Charge 2 indicates that the related investment is a single-priced fund
C. Only Charge 3 is normally described as a front-end load
D. Charge 4 indicates that the related investment is an open-ended fund

17. An individual has an annual income in excess of £80,000. They disposed of listed shares, purchased for £40,000, for a sale price of £75,400 in the 2025–26 tax year. What capital gains tax (CGT) liability is incurred?

A. £0
B. £5,832
C. £7,776
D. £8,496

18. What is the accrued interest on the purchase of a £100 nominal UK gilt paying a 6% coupon, which settles 36 days after the last coupon date?

A. £0.59
B. £1.17
C. £0.30
D. £0.00

19. The FCA's Consumer Duty is underpinned by three 'cross-cutting' rules, one of which is that businesses should:

A. Pay due regard to the interest of its customers and treat them fairly
B. Act in good faith towards all customers
C. Enable and support professional customers to pursue their financial objectives
D. Avoid foreseeable harm to retail customers

20. Chris invested £6,000 at 4% a year compounded quarterly, whereas Michael invested £6,000 at 3.8% a year compounded annually. Based on gross interest, how much more will Chris receive by the end of the first year compared to Michael?

A. £8.73
B. £12.00
C. £12.35
D. £15.62

21. Two funds, Fund R and Fund S, both have maintained a positive alpha. If Fund R has a R-squared value of 85% and Fund S of 40%, what does this imply about the performance of these funds?

Which of the following statements is true?

A. Fund S's performance suggests a higher degree of skilful management
B. Fund R's performance is likely more due to skilful management than market movements
C. Fund S's performance is more influenced by market trends than Fund R's
D. Both funds' performances are equally influenced by market trends and skilful management

22. An investor recently made four purchases:

Purchase 1 – £10,100 worth of government bonds

Purchase 2 – £20,100 worth of exchange-traded funds (ETFs)

Purchase 3 – £30,100 worth of bank shares, processed using CREST

Purchase 4 – £40,100 worth of engineering company shares, processed using a stock transfer form

Which of the following statements is true?

A. Only the stamp duty calculation for Purchase 1 needs to be rounded to the nearest £5

B. Stamp duty will only apply in the case of Purchase 2

C. Stamp duty reserve tax (SDRT) will only apply in the case of Purchase 3

D. Only the stamp duty calculation for Purchase 4 needs to be rounded to the nearest penny

23. The following measurements relate to the performance of a particular investment over a ten-year period:

Average annual return	=	6.60%
Standard deviation	=	2.20%
Variance	=	4.84%

As a result of this data, an investor can expect that there is a two-thirds chance of the annual return falling within the range of:

A. 1.76% and 8.80%

B. 1.76% and 11.44%

C. 4.40% and 8.80%

D. 4.40% and 11.44%

24. What is the difference between residence and domicile?

A. Residence is a short-term concept, whereas the status of domicile is more permanent

B. An individual can have only one residence, but multiple domiciles at any given time

C. Residence determines tax obligations, while domicile is irrelevant for tax purposes

D. Domicile refers to a legal concept, while residence is a geographical location without legal implications

25. Four clients recently used Shariah-compliant Islamic products:

Client A used an Ijara

Client B used a Musharaka

Client C used a Mudaraba

Client D used an Ijara-wa-Iqtina

Which of the following statements is true?

A. Clients A and D both entered into leasing agreements, but only Client D is able to buy the product at the end of the contract
B. Clients B and C both entered into an investment partnership, but only client B is deemed to be a majority partner
C. Only Client B can suffer from a partial loss of the capital initially invested
D. Only Client D can cancel the contract mid-term

26. What is the industry standard settlement time for gilts?

A. T+1
B. T+2
C. T+3
D. T+20

27. The following four clients are interested in making regular contributions into a non-stakeholder personal pension:

Client 1 – age 28, earns £40,000 a year

Client 2 – age 38, earns £50,000 a year

Client 3 – age 48, earns £60,000 a year

Client 4 – age 58, with no earnings for the last eight years

When considering gross tax-relievable annual contributions, which of the following statements is true?

A. Only Clients 1, 2 and 3 are permitted to contribute
B. Client 1's maximum is £36,400 higher than Client 4's maximum
C. Client 2's maximum is £46,000 higher than Client 4's maximum
D. Only Clients 2 and 3 have a maximum which is in excess of £30,000

28. An investor recently purchased four bonds:

Bond	Market Price	Coupon
1	120p	4.1p
2	140p	5.2p
3	172p	5.6p
4	182p	6.1p

This indicates that:

A. Bond 1 has the highest running yield
B. Bond 2 has the highest gross redemption yield
C. Bond 3 has the lowest running yield
D. Bond 4 has the lowest gross redemption yield

29. A portfolio manager is looking at the correlation of performance statistics between six different assets:

	1	2	3	4	5	6
Asset 1	–	–	–	–	–	–
Asset 2	0.65	–	–	–	–	–
Asset 3	0.71	0.91	–	–	–	–
Asset 4	-0.46	0.72	-0.81	–	–	–
Asset 5	-0.12	-0.21	-0.58	-0.61	–	–
Asset 6	-0.32	-0.48	0.79	0.14	-0.42	–

Based solely on this data, which asset combination is likely to be most diversified?

A. Assets 1 and 5
B. Assets 2 and 3
C. Assets 3 and 4
D. Assets 4 and 6

30. Siobhan, a non-taxpayer, received a payment of £400 per month into her bank account from an accumulation and maintenance trust, set up for her benefit by her grandfather. Assuming the trustees have paid sufficient tax and the trust income is made up of dividends, what gross income and reclaimable tax credit, if any, applies in respect of Siobhan over the 2025–26 tax year?

A. £5,260.27 and £460.27
B. £ 7,245.28 and £2,445.28
C. £7,914.26 and £3,114.26
D. £9,600.00 and £4,800.00

31. £100 is invested at the start of each year for five years at a fixed rate of interest of 4% pa compounded annually. What will the accumulated value of these series of payments be at the end of the five-year period?

A. £563.30
B. £574.55
C. £581.61
D. £599.02

32. The government announces four policy changes:

Change 1 – An increase in the defence budget
Change 2 – An increase in the use of means testing for social security benefits
Change 3 – An increase in the inheritance tax (IHT) threshold
Change 4 – An increase in the rate of capital gains tax (CGT)

Which of the following statements is true?

A. Changes 1 and 3 are examples of expansionary fiscal policy
B. Changes 1 and 4 are examples of contractionary fiscal policy
C. Changes 2 and 3 are examples of expansionary monetary policy
D. Changes 1 and 2 are examples of contractionary monetary policy

33. What is the main difference between strategic and tactical asset allocation?

A. In strategic asset allocation, the decisions on the portfolio mix are taken from a long-term perspective. Tactical asset allocation engages in short-term tactical deviations
B. In tactical asset allocation, the decisions on the portfolio mix are taken from a long-term perspective. Strategic asset allocation engages in short-term tactical deviations
C. Strategic asset allocation involves timing the market, whereas tactical asset allocation involves taking a long-term view on markets
D. Strategic asset allocation is an active investment approach, whereas tactical asset allocation is a passive investment strategy

34. If the Financial Ombudsman Service (FOS) finds in favour of a complainant, what is the maximum that it can award, in monetary terms, for an act or omission that occurred on 15 June 2025?

A. £85,000 plus the complainant's costs and an award for suffering, damage to reputation, distress or inconvenience, if appropriate

B. £150,000 plus the complainant's costs and an award for suffering, damage to reputation, distress or inconvenience, if appropriate

C. £200,000 plus the complainant's costs and an award for suffering, damage to reputation, distress or inconvenience, if appropriate

D. £445,000 plus the complainant's costs and an award for suffering, damage to reputation, distress or inconvenience, if appropriate

35. An investor holds an investment of £50,000 in an income-producing, multi-asset, open-ended fund, which has 65% of its assets held in fixed-interest securities and the balance in equities. How are the distribution payments treated for tax purposes?

A. Taxable as a dividend

B. Taxable as interest

C. Taxable as a capital gain

D. 22.5% tax is deducted at source and there is no further liability

36. One of the disadvantages of a fact find is:

A. Its subjectivity

B. Its inconsistency

C. Its length

D. It does not provide opportunities for quality checking

37. When compared to a direct investment in property, investment in a real estate investment trust (REIT) offers what tax advantages?

A. Exemption from withholding tax on distributions only

B. Exemption from CGT on investment profits and withholding tax on distributions

C. Exemption from corporation tax on property-related income and gains

D. Exemption from inheritance tax on profits made from property investment

38. One of the key drivers of vulnerability is:

A. Life events

B. Overconfidence

C. Low capacity for loss

D. Investment experience

39. A client requests your advice on holding cash deposits and explains that they are happy to accept an element of illiquidity for a higher rate of interest. Which of the following is likely to offer the best return?

A. Notice account
B. Fixed-term deposit
C. Current account
D. Money market account

40. How is income treated in a constant net asset value (CNAV) money market fund?

A. It accrues daily, and is paid to the investor
B. It accrues monthly, and is rolled-up
C. It accrues daily, and can be reinvested or paid out
D. It accrues monthly, and is reflected in a higher share price

41. The state pension age (SPA) is the age at which people eligible:

A. For a pension provided by the government
B. To draw on an occupational pension scheme
C. To register for a stakeholder pension
D. To purchase an annuity

42. Which of the following is one of the factors of production in the economy?

A. Manufacturing
B. Servicing
C. Market
D. Labour

43. An investor proposes to invest £200,000 into a venture capital trust (VCT) this tax year. Which of the following statements is true?

A. Dividends are subject to income tax at the investor's marginal rate
B. Income tax relief is 30% on a maximum of £200,000 per tax year, on new ordinary shares
C. Only higher and additional rate taxpayers can claim income tax reliefs
D. Gains on disposal of shares in a VCT are subject to capital gains tax (CGT) of 10%

44. In 2025–26, the Johnson family discretionary trust elects to distribute capital to one of the beneficiaries to cover their education costs. In order to facilitate the payment, the trustees elect to sell some of the underlying investments to generate cash which crystallises a capital gain. What rate of tax will the trust pay on the gain?

A. 18%
B. 24%
C. 28%
D. 50%

45. In 2025–26, the Masood family discretionary trust receives total interest of £785 on its cash deposit holdings. Assuming no other income is received by the trust, what is the income tax liability?

A. £112.15
B. £128.25
C. £308.90
D. £353.25

46. Under the rent-a-room scheme, how much rental income is an individual allowed to receive free of tax each year?

A. £3,600
B. £7,500
C. £10,000
D. £11,880

47. Which of the following shares offer a predetermined rate of return?

A. Zero dividend preference shares
B. 'A' shares
C. 'C' shares
D. 'S' shares

48. What percentage of its taxable income must a real estate investment trust (REIT) distribute to its shareholders in order to remain exempt from corporation tax on profits and gains?

A. 100%
B. 90%
C. 80%
D. 70%

49. What additional risk are investors in synthetic exchange-traded products (ETPs) exposed to, compared to investment in a physical ETP?

A. Interest rate
B. Liquidity
C. Counterparty
D. Currency

50. An investor is looking to invest in an individual savings account (ISA). What is the maximum possible contribution that they can make in 2025–26?

A. £9,000
B. £11,520
C. £15,240
D. £20,000

51. What is the difference between attitude to risk (ATR) and capacity for loss (CFL)?

A. ATR relates to how a client feels about investment, while CFL is about how much risk they can actually afford
B. ATR is determined by a client's financial situation, while CFL is based purely on their investment experiences.
C. ATR is based on objective factors, while CFL is based on subjective factors
D. ATR only applies to short-term investments, while CFL is only relevant for long-term financial planning

52. What is the maximum investment in an enterprise investment scheme (EIS) that a taxpayer can make during 2025–26, ignoring any investment in knowledge-intensive companies?

A. £300,000
B. £500,000
C. £1,000,000
D. £2,000,000

53. Which investment strategy is based on the theory that certain crowd behaviour by investors can lead to exploitable mis-pricings in securities markets?

A. Contrarian
B. Quantitative
C. Active market timing
D. Trend investing

54. Which of the following is one of the Financial Conduct Authority's (FCA)'s Principles for Businesses?

A. A firm must remain competitive in its market at all times
B. A firm must manage its conflicts of interest in a timely fashion
C. A firm must conduct its business with integrity
D. A firm must pay due regard to its stakeholders

55. Marcia is aged 69 and still works part-time. Her total annual income is £19,750. What is her liability to income tax in the 2025–26 tax year?

A. Zero
B. £1,436
C. £2,872
D. £3,950

56. Which body has the responsibility and tools to maintain financial stability?

A. Financial Conduct Authority (FCA)
B. Prudential Regulation Authority (PRA)
C. Financial Ombudsman Service (FOS)
D. Financial Policy Committee (FPC)

57. If an adviser working in a regulated financial firm suspects a client is involved in an act concerning the proceeds of crime, the Proceeds of Crime Act (POCA) 2002 requires that:

A. An immediate report is made to the firm's money laundering reporting officer (MLRO)
B. Firm evidence is collated before the firm's MLRO makes a report to the National Crime Agency (NCA)
C. Confidentiality under the GDPR is honoured until the facts are established
D. Confidential advice on the required procedure is immediately sought from the NCA

58. What is the maximum award available to an individual through the Financial Services Compensation Scheme (FSCS) in the event of a default by their bank?

A. £50,000
B. £85,000
C. £100,000
D. £150,000

59. How do the calculations of gross national product (GNP) and gross domestic product (GDP) differ?

A. GDP excludes capital consumption
B. GNP includes net property income from abroad
C. GDP excludes national income
D. GNP includes depreciation

60. Bob has withholding tax assessed on a relief at source basis and Mary on a reclaim basis. This indicates that:

A. Only Bob's residence and tax status have been established in advance
B. Only Bob is entitled to claim a reduction on the full rate of withholding tax
C. Only Mary may benefit from a full rebate of the original amount of withholding tax
D. Only Mary can offset tax withheld against her domestic tax liabilities

61. The return on risk-free Treasury notes is 3%. What is the Sharpe ratio on a portfolio with a standard deviation of 0.07, a beta of 0.8 and an expected return of 11%?

A. 0.10
B. 1.14
C. 2.65
D. 3.67

62. Which of the following is true regarding open-ended and closed-ended funds?

A. OEICs and investment trusts are examples of open-ended funds, and unit trusts are a type of closed-ended vehicle
B. Open-ended funds operate with a fixed initial number of units or shares outstanding, whereas closed-ended funds issue new shares to meet investor demand
C. The price of open-ended funds moves in response to supply and demand; for closed-ended funds, the price is based on the NAV per share
D. As open-ended funds grow, new shares or units are issued by the manager, while managers of closed-ended funds play no role in buy or sell transactions

63. What is the maximum contribution an individual can make to a junior individual savings account (JISA) in 2025–26?

A. £3,600
B. £4,368
C. £9,000
D. £20,000

64. What is one of the key challenges for responsible, sustainable and ethical investors when selecting an appropriate benchmark against which to compare the financial performance of their portfolio?

A. Responsible, sustainable and ethical indices are not typically measurable, thus they do not possess the basic properties that a benchmark is required to have

B. These benchmarks rely on the constituent companies to self-report, and is not confirmed by the index provider, thus making these benchmarks notoriously unreliable

C. There are too many options, which can make selection confusing and complicated for investors to select a benchmark that appropriately reflects their values and morals

D. There is too little choice, so investors are forced to select a benchmark that does not necessarily reflect their responsible, sustainable and ethical concerns

65. Which of the following is a coincident indicator of economic activity?

A. Gross domestic product (GDP)

B. Unemployment rate

C. Stock market returns

D. Money supply

66. What information can be gained from considering a portfolio's information ratio?

A. The return achieved for the level of risk taken

B. The portfolio's sensitivity to market movements

C. The extent to which the portfolio has outperformed its benchmark

D. The degree to which a portfolio manager uses skill and knowledge to enhance returns

67. Which one of the following is a key measure of economic activity?

A. Consumer prices index (CPI)

B. Purchasing managers' index (PMI)

C. Gross national product (GNP)

D. Dow Jones Industrial Average (DJIA)

68. What percentage of net scheme assets can a small self-administered scheme (SSAS) lend to the sponsoring employer?

A. 100%

B. 50%

C. 25%

D. 0%

69. The government will deem an individual to be UK-domiciled if they have spent at least how many of the past 20 tax years as a resident in the UK?

A. 10
B. 12
C. 15
D. 17

70. Which of the following best describes a price-weighted index?

A. Larger companies account for proportionately more of the index
B. Holdings are weighted according to the share price of each underlying constituent
C. It assumes that equal amounts are invested in each share in the index
D. Constituents with a high market capitalisation, relative to that of other constituents, have a greater influence on the index value

71. Which of the following is not an advantage of robo-advisors?

A. Easy account setup
B. Low minimum balances
C. Guaranteed performance
D. Remove behavioural biases from investing activities

72. What is the maximum amount of tax relief that a seed enterprise investment scheme (SEIS) investor can claim in the current year?

A. 50%
B. 40%
C. 30%
D. 20%

73. A key difference between price-to-cash flow (P/CF) ratio and price-to-book (P/B) ratio is: :

A. The P/CF ratio is mainly used in the banking sector, while the P/B ratio is used for industrials
B. The P/CF ratio includes non-cash items, while the P/B ratio excludes them
C. The P/B ratio uses cash flow per share, while the P/CF ratio uses net income
D. The P/CF ratio evaluates cash generation, while the P/B ratio compares market value to book value

74. Which of the following criteria must apply in order for a deed of variation to be valid?

A. Executed within three years of death
B. Approved by the Court of Protection
C. Not made for any consideration
D. Estate valued at less than £325,000

75. How are dividends from venture capital trusts (VCTs) taxed in the hands of the original investor?

A. They are paid gross with no liability to tax
B. They are paid with an accompanying 10% tax credit with no further liability
C. They are taxed at the investor's highest marginal rate
D. They are taxed at a fixed rate of 30%

76. What rate of income tax would be levied on dividends received by an investor with earnings of £200,000 in the current tax year?

A. 40%
B. 45%
C. 33.75%
D. 39.35%

77. What is the purpose of a liquidity ratio in financial analysis?

A. To assess the trading or operating performance of a company
B. To evaluate the trading risk of a company
C. To assess the ability of the business to meet its long-term debts
D. To assess the returns to those providing financing to the company

78. How much would an individual need to invest today to have £5,000 in six years' time, assuming a gross interest of 3.5% a year?

A. £3,950.00
B. £4,125.00
C. £4,067.50
D. £4,209.87

79. A UK investor has £50,000, which they convert into €60,000. This is invested in European shares, priced at €3 per share. After one year, the investor sells the shares at €3.20 per share, and they then convert the sale proceeds to sterling at €1.30/£1. What is the gain or loss in sterling terms?

A. A gain of £7,780
B. A gain of £1,150
C. A loss of £769
D. A loss of £3,500

80. Which of the following NS&I products offers returns that are tax-free?

A. Investment account
B. Direct saver
C. Green savings bonds
D. Premium bonds

Answers to Multiple Choice Questions

1. C Chapter 3, Sections 2.2.2 and 2.2.3

Risks 1 and 2 are examples of systematic risk which affect the financial system as a whole. Risks 3 and 4 are unsystematic risks, so can usually be reduced through diversification.

2. D Chapter 1, Section 3.5.4

A = ((220 x 48) + (16 x 190)) / 64 = 212.5p

B = ((225 x 48) + (12 x 180)) / 60 = 216p

C = ((230 x 48) + (16 x 170)) / 64 = 215p

D = ((235 x 48) + (12 x 160)) / 60 = 220p

3. D Chapter 6, Section 1

Given the client's age, attitude to risk, investment objective and timescale, increasing the equity allocation is the most appropriate option.

4. B Chapter 3, Section 1.4

Time value of money is used to calculate the amount needed now (ie, present value) to produce a future sum.

5. A Chapter 8, Section 2.2

Fund A: (60% x 12%) + (40% x 8%) = 10.4%

Fund B: (30% x 12%) + (70% x 8%) = 9.2%

Increasing the portfolio exposure to equities by 30 percentage points improved the return by 1.2 percentage points.

6. C Chapter 2, Section 7.7

Switch A – likely to occur as growth accelerates, as cyclical stocks are sensitive to the economic cycle.

Switch B – likely to occur during the early stages of a bull market, when investors are seeking higher returns and are willing to take on more risk.

Switch C – likely to occur at the beginning of a bear market, as safe haven assets tend to appreciate in value during times of economic uncertainty.

Switch D – likely to occur at the start of a bull market, as cyclical stocks should thrive in favourable economic conditions.

7. B Chapter 1, Section 2.2.3

France has Bons du Trésor à Taux Fixe (BTFs) with maturities of up to 12 months. Germany has bearer Bunds with maturities of between ten and 30 years. US Treasury bonds (or T-bonds for short) have a maturity of over ten years. Japanese government bonds (JGBs) are usually issued with maturities of ten years.

8. C Chapter 8, Section 2.5

The TWRR methodology is to determine the sub-period returns first and then to chain-link them to determine the cumulative wealth relative for the full one-month period.

Sub-period return calculations:

1–10 day return: (530,000 – 500,000) / 500,000 = 0.06 or 6.00%

11–30 day return: (580,000 – 550,000) / 550,000 = 0.0545 or 5.45%

(where the figure of $550,000 includes the contribution of $30,000 made on the day)

TWRR = [(1 + 0.06) x (1 + 0.0545)] – 1 = 0.1178 or 11.78%

9. B Chapter 1, Section 1.4.2

As Denise is locked in for a shorter term, she has a lower inflation risk exposure. Denise and Kimberly have similar exposure to capital risk if the deposit taker defaults. Their exposure to interest rate risk is different due to their different fixed terms. Poor service from the deposit taker could expose either to operational risk.

10. B Chapter 7, Section 3.1

Responsible, sustainable and ethical funds generally state explicitly the criteria they use in selecting investments so that investors can decide if a particular fund meets their needs. A negative screen involves deliberately excluding companies and sectors involved in activities deemed to be unacceptable (eg, genetic engineering and tropical hardwood).

11. A Chapter 1, Section 4.4.3

Stamp duty land tax (SDLT) on UK residential property is charged on each proportion of the purchase price as follows:

Purchase price/lease premium or transfer value	Rate
Up to £125,000	Zero
The next £125,000 (£125,001 to £250,000)	2%
The next £675,000 (£250,001 to £925,000)	5%
The next £575,000 (£925,001 to £1.5 million)	10%
The remainder above £1,500,001	12%

Therefore, in this case, SDLT is charged as follows:

First £125,000 @ 0% = £0

Next £125,000 @ 2% = £2,500

Remaining £500,000 @ 5% = £25,000

Therefore, £27,500 is due to be paid.

12. D Chapter 8, Sections 1.2.4 to 1.2.7

The S&P 500 Index and MSCI World Index are market capitalisation-weighted. The Nikkei 225 Index and the Dow Jones Industrial Average (DJIA) Index are price-weighted.

13. D Chapter 4, Sections 5 and 5.1.1

The rate of CGT relating to the disposal of chargeable assets is 18% for basic rate taxpayers and 24% for higher and additional rate taxpayers. However, an individual's principal private residence (PPR) is exempt.

14. B Chapter 2, Sections 5.6.1 and 7.6.1

The current account comprises a country's imports and exports of goods, services and capital, as well as income from investments, employee compensation and current transfers.

15. B Chapter 5, Section 10.2.1

Call options are in-the-money if the strike price is below the current price, and vice versa for put options.

16. B Chapter 5, Sections 5.1 and 5.2.1

Dilution levies tend to be imposed on single-priced funds. Initial charges (also called preliminary charges) are a type of front-end load and exit penalties are a type of back-end load. Both open- and closed-ended funds charge annual management fees.

17. C Chapter 4, Section 5.1.1

Shares purchased for £40,000 and sold for £75,400 (assuming these figures include all allowable costs) create a gain of £35,400. For 2025–26, the annual capital gains tax (CGT) allowance is £3,000, so the taxable gain is £32,400 (ie, £35,400 – £3,000).

The individual's income level indicates they will pay CGT at a higher rate of 24%. Therefore, tax due is 24% x £32,400 = £7,776.

18. A Chapter 1, Section 2.10.5

Accrued interest = (6% / 2) x (36 / 183) = £0.59 per £100 nominal of the gilt.

19. D Chapter 7, Section 1.8

The Consumer Duty is underpinned by three 'cross-cutting' rules that set out how businesses should act to deliver good customer outcomes:

1. Act in good faith toward retail customers.
2. Avoid foreseeable harm to retail customers.
3. Enable and support retail customers to pursue their financial objectives.

20. D Chapter 1, Section 1.2.2

By the end of the first year, Chris's investment is worth 6,000 x 1.014 = £6,243.62 and Michael's is worth 6,000 x 1.038 = £6,228.00. Chris, therefore, received £15.62 more than Michael during this period (ie, £6,243.62 – £6,228.00).

21. A Chapter 3, Section 2.8.5

The relationship between alpha and R-squared can provide additional insights into fund performance. For example, a high R-squared value for Fund R (ie, above 70%), suggests a strong correlation with the market, in which case Fund R's high positive alpha may be attributed more to market movements than to skilful management. If this coincides with a low R-squared for Fund S (which has also maintained a positive alpha), then this implies that Fund S's performance is less influenced by broader market trends. This scenario would suggest a potentially higher degree of skilful management in selecting securities or timing market movements effectively for Fund S than Fund R, which could result in a greater potential for Fund S to consistently outperform the market going forward.

22. C Chapter 4, Section 8.1

On company shares, stamp duty applies to paper transactions (rounded up to the nearest £5), and SDRT is a paperless transaction that is settled through CREST (rounded up to the nearest penny). There is no stamp duty or SDRT on the purchase of government bonds or ETFs.

23. C Chapter 3, Section 2.4.1

There is a two-thirds chance that the annual return will fall within one standard deviation of the mean (ie, 6.60% + 2.20%, and 6.60% – 2.20%).

24. A Chapter 4, Sections 7.1.1 and 7.1.2

Residence is a short-term concept that reflects where an individual lives. An individual's residence (and, therefore, their tax position) in the UK will be determined using the statutory residence test (SRT).

The status of domicile is a more permanent one than that of residence. Broadly speaking, an individual is domiciled in a country where they have their permanent home. However, an individual can often retain their domicile for the whole of their life, even if they live abroad. Although it is possible to have dual nationality or dual residence, it is not possible to have a dual domicile.

25. A Chapter 7, Section 3.3

An Ijara is a leasing agreement whereby the bank buys an item for a customer and then leases it back over a specific period. An Ijara-wa-Iqtina is a similar arrangement, except that the customer is able to buy the item at the end of the contract.

26. A Chapter 1, Section 2.10.3

In the UK, gilts are settled T+1 (ie, one business day after the transaction date).

27. B Chapter 5, Section 14.5.1

An individual with no earnings or who earns less than £3,600 gross (ie, £2,880 net) can still contribute to a personal or stakeholder pension scheme (ie, not through an employer's scheme) and qualify to have tax relief added to those contributions. Tax relief is restricted to the higher of £3,600 or 100% of relevant UK earnings (up to £60,000).

Based on this, Client A can contribute £40,000, Client B £50,000, Client C £60,000 and Client D £3,600.

28. C Chapter 1, Sections 2.8.1 and 2.8.3

The running yield (also known as the interest yield) on a bond expresses the income received on it as a percentage of the investor's outlay. It is calculated by dividing the gross coupon by the market price. The running yield for Bond 3 is lowest at 3.26%, and highest for Bond 2 at 3.71%. GRYs cannot be determined solely from this data as there is no information as to when the bonds mature.

29. A Chapter 6, Section 2.8.1

Diversification and risk reduction are best achieved by combining assets whose returns have not moved in perfect step, or are not perfectly correlated with one another. If a portfolio manager can find two asset classes that exhibit low (ie, close to zero) correlation, the diversification benefit is maximised.

30. C Chapter 4, Section 2.2.2

During the tax year, Siobhan receives a payment of £400 per month, or £4,800 over the tax year.

Income is deemed to have already been taxed at the trust rate, currently 39.35% for dividend income. Therefore, each net monthly payment of £400 equates to £400 / 0.6065 = £659.52 gross.

Over the tax year, gross payments = £659.52 x 12 = £7,914.26.

Hence, the amount reclaimable is £7,914.26 – £4,800 = £3,114.26.

31. A Chapter 3, Section 1.3.2

Future value = £100 x $[(1.04^5 - 1) / 0.04] \times (1 + 0.04)$ = £100 x 5.416 x 1.04 = £563.30.

32. A Chapter 2, Section 7.2

Fiscal policy is government policy on taxation, public borrowing and public spending. Spending more money or collecting less taxes are examples of an expansionary fiscal stance.

33. A Chapter 6, Sections 2.4 and 2.5

In strategic asset allocation (SAA), the decisions on the portfolio mix are taken from a long-term perspective. Tactical asset allocation (TAA) engages in short-term, tactical deviations from the mix, in order to capitalise on unusual or exceptional investment opportunities.

34. D Chapter 7, Section 7.3

The maximum that the Financial Ombudsman Service (FOS) can award, in monetary terms, is £445,000 plus the complainant's costs, and an award for suffering, damage to reputation, distress or inconvenience, if appropriate. This applies to claims brought to the FOS on or after 1 April 2025, for acts of omissions by firms that occurred on or after 1 April 2019.

35. B Chapter 4, Section 3.2.1

The tax treatment of distributions from collectives depends on the type of investments in which the scheme invests. If an open-ended fund holds 60% or more of its assets in fixed-interest securities, it pays interest; otherwise, it pays dividends. Distributions are paid gross and the individual will pay any tax on this at the applicable rate via their tax return.

36. C Chapter 7, Section 1.2.1

The advantage of a fact find is in its consistency, the factual record it creates, and the opportunity for quality checking that it provides. One of its disadvantage is the customer's reaction to what they may perceive as a lengthy form-filling exercise; hence, the need for communication skills arises.

37. C Chapter 1, Section 4.8.5

The REIT regime allows companies carrying on a property rental business to benefit from exemptions from corporation tax on property-related income and gains, providing that they meet certain conditions.

38. A Chapter 7, Section 1.2.3

The four key drivers of vulnerability are health, resilience, life events and capacity. That said, other factors can make clients vulnerable as well. For example, the client may have reliance on another, display unusual behaviour, be unresponsive, or have difficulties filling in forms clearly and correctly.

39. D Chapter 1, Section 1.9

Money market accounts are basically premium accounts, or high-interest savings accounts. As these accounts are an investment, there are certain restrictions. Investors' money will not be as liquid as a regular savings account and the account usually requires a minimum deposit and a minimum balance. Withdrawals are allowed, but there is a limit to how many can be made.

40. C Chapter 1, Section 1.10.1

Units/shares in CNAV funds are issued with an unchanging face value. Income in the fund is accrued daily, and can either be paid out to the investor or used to purchase more units/shares in the fund at the end of each month.

41. A Chapter 2, Section 3.1

The SPA is the age at which people become eligible for the state pension, a regular payment provided by the government, which is currently set at 66.

42. D Chapter 2, Section 3.4

Economists identify four factors of production in the economy: land, labour, capital (ie, machinery and plant) and enterprise. These factors are combined in various ways to produce goods and services.

43. B Chapter 5, Section 9.3

Investors in VCTs benefit from income tax relief on investments of up to £200,000 at 30% on the cost of the shares. This can be set against any income tax liability that is due, whether at the basic, higher or additional rate. This relief can only be claimed for purchases of new ordinary shares and they must have been held for at least five years; otherwise, the relief is withdrawn.

There is no income tax to pay on dividends from ordinary shares in VCTs. This relief is available on both newly issued and second-hand shares (ie, those bought on the stock exchange in the secondary market).

44. B Chapter 4, Section 5.1.2

For trusts, gains above the CGT allowance are taxed at 24%.

45. D Chapter 4, Section 2.2.2

In both discretionary trusts and accumulation & maintenance (A&M) trusts, where total income is less than £500, there will be income tax to pay. If total income is above £500, then the whole amount (not just the amount over £500) will be taxed at the 'trust' rate of 39.35% for dividends and 45% for all other income (eg, rental income and savings interest). These rates are equivalent to the additional rate for individuals. In this case, the entire amount of £785 is subject to a rate of 45%, resulting in an income tax liability of £353.25.

46. B Chapter 1, Section 4.2.1

Very low rental income under the rent-a-room scheme (where someone lets out a room in their own home) is tax-free, up to £7,500 a year for the 2025–26 tax year.

47. A Chapter 5, Section 3.1.4

Zero dividend preference shares (zeros or ZDPs) pay no income, but offer a predetermined rate of return when the investment trust is finally wound up (after any bank loans are repaid). Returns are not guaranteed as there may be insufficient assets at wind-up, but there is a very strong likelihood that the return will be paid because of their prior claim on the assets.

48. B Chapter 1, Section 4.8.5

To qualify as a REIT, they have to offer fully transferable shares, have at least 100 shareholders and distribute at least 90% of their profits each year to shareholders as dividends.

49. C Chapter 5, Section 2.5

Synthetic ETPs gain their exposure using derivative contracts (eg, total return swaps), which they negotiate with third-party investment banks or counterparties. Investors in synthetic ETPs are, therefore, more exposed to counterparty risk, as the counterparty may be unable to fulfil their financial obligations.

50. D Chapter 5, Section 6.1

Overall, the contributions to ISAs are limited to £20,000 in total for the tax year 2024–25, although there are some exceptions depending on the type of ISA.

51. A Chapter 7, Section 2.2.3

While ATR is about how a client feels about investment risk, CFL is about how much risk they can actually afford to take. Therefore, ATR and CFL should be considered and documented separately.

52. C Chapter 5, Section 9.1.1

Income tax relief is given on investments of up to £1 million in an EIS-qualifying company, at 30% on the cost of the shares. This means a maximum tax reduction in any one year of £300,000 (assuming the individual had sufficient income tax liability to cover this). A further £1 million can be invested in knowledge-intensive companies (KICs), thus increasing the total eligible investment to £2 million.

53. A Chapter 1, Section 3.8.1

A contrarian investor takes the view that the market has overreacted to a particular situation, and believes a company offers better prospects in the future as a result.

54. C Chapter 7, Section 2.7.1

'A firm must conduct its business with integrity' is one of the FCA's Principles for Businesses.

55. B Chapter 4, Section 1.2.1

In the UK, all individuals – regardless of age, gender or occupation – are entitled to a personal allowance, provided that they meet the residency requirements. Marcia is therefore entitled to a personal allowance of £12,570. No reduction for excess income applies.

Marcia's taxable income is £19,750 – £12,570 = £7,180.

This is taxable at the basic rate of 20%. Therefore, Marcia's income tax liability is £1,436 (ie, 20% of £7,180).

56. D Chapter 1, Section 1.6.1

The Bank of England's Financial Policy Committee (FPC) has the responsibility and tools to maintain financial stability.

57. A Chapter 4, Section 11.1

In spite of the professional reasons for maintaining client confidentiality, there are circumstances in which disclosure of information about clients' affairs is required. The requirement concerns situations in which a financial adviser becomes aware that information held on a client indicates possible breaches of the law. Under the Proceeds of Crime Act (POCA) 2002, it is a criminal offence for anyone working in a regulated financial firm not to report any activity that they suspect, or ought to suspect, involves the proceeds of crime – eg, an act of tax evasion by an individual. The report should be made to the firm's money laundering reporting officer (MLRO), who must then report appropriate cases to the National Crime Agency (NCA).

58. B Chapter 1, Section 1.7.1

The FSCS will pay maximum compensation of £85,000 for each eligible account holder per authorised firm, in the event of default by a UK-regulated bank or building society.

59. B Chapter 2, Section 6.1.3

The difference between GDP and GNP is net property income from abroad. The sum of GDP plus net property income from abroad is the GNP.

60. A Chapter 4, Section 7.3.3

Depending on the nature of the withholding taxes deducted in the country of source of any income, and the terms of any double taxation agreement (DTA), any reduction of withholding taxes may be affected by:

- relief at source (ie, on notification of the investor's status, the withholding tax is reduced or not applied), or
- reclaim (that is, the withholding tax is deducted, but the investor can submit the appropriate paperwork to the tax authorities and reclaim some or all of the sum that was withheld).

61. B Chapter 3, Section 2.5.1

The Sharpe ratio measures the return over and above the risk-free interest rate from an undiversified equity portfolio for each unit of risk assumed by the portfolio, where risk is measured by the standard deviation of the portfolio's returns. The formula is:

$$\text{Sharpe ratio} = (R_p - R_F) / \sigma$$

where:

R_p	=	the expected return on the portfolio
R_F	=	the risk-free return
σ	=	the standard deviation of the portfolio

In this case, the Sharpe ratio is (0.11 – 0.03) / 0.07 = 1.14. This means that for every unit of risk, an investor is earning 1.14 units of excess return.

62. D Chapter 5, Section 1.1

When an investor buys units or shares in an open-ended fund, the fund issues new units/shares to fulfil the order. There is no limit on the number of units/ shares that can be issued to meet investor demand.

The other type of CIS is closed-end funds, so called because they do not accept any new money or redemptions while the fund is being managed. Closed-ended funds operate with a fixed number of shares outstanding (while they can issue new shares, this is not undertaken regularly).

63. C Chapter 5, Section 6.2

Anyone can put money into a JISA, up to the limit of £9,000 per account for 2025–26.

64. C Chapter 7, Section 8.1

There are many different responsible, sustainable and ethical indices applying different screening processes, methodologies and formulae. While it is generally important that investors have choice, one risk of having too many options is that it becomes increasingly confusing and complicated for investors to select a benchmark that appropriately reflects their values and morals.

65. A Chapter 2, Section 6.10

Coincident indicators are those which change at approximately the same time as the whole economy, thereby providing information about the current state of the economy. Examples include personal income, gross domestic product (GDP), industrial production and retail sales.

66. D Chapter 3, Section 2.4.5

The information ratio assesses the degree to which a portfolio manager uses skill and knowledge to enhance returns. It compares the excess return achieved by a portfolio over a benchmark to the portfolio's tracking error, which is calculated as the standard deviation of excess returns from the benchmark.

67. C Chapter 2, Section 6.1

Three key measures of economic activity are national income (NI), gross domestic product (GDP) and gross national product (GNP).

68. B Chapter 5, Section 14.3

SSASs may borrow to invest and to provide a member's benefit, that has become payable, but these loans are subject to certain conditions set by HMRC. These conditions include the loan should not exceed 50% of the net market value of the scheme's assets.

69. C Chapter 4, Section 7.1.2

Deemed domicile status applies once an individual has been resident in the UK for 15 out of the past 20 years, meaning it will apply in their 16th year of residence.

70. B Chapter 1, Sections 3.7

Price-weighted indices are constructed on the assumption that an equal number of shares are held in each of the underlying index constituents. However, as these equal holdings are weighted according to each constituent's share price, those with a high share price (relative to that of other constituents) have a greater influence on the index value.

In market capitalisation-weighted indices, larger companies account for proportionately more of the index as they are weighted according to each company's market capitalisation. Equal-weighted indices assume that equal amounts are invested in each share in the index.

71. C Chapter 7, Section 1.7

Robo-advisors are digital platforms that provide financial and investment services with little human interaction (if any at all). Performance is not guaranteed.

72. A Chapter 5, Section 9.2.1

Income tax relief is given on investments of up to £200,000 at 50% on the cost of the shares (ie, a maximum tax reduction in any one year of £100,000, providing the investor has a sufficient income tax liability).

73. D Chapter 2, Section 1.3.4

The price-to-cash flow (P/CF) ratio measure assesses the market's expectations or prospects about a company's financial health. A low P/CF ratio may suggest that the price of the firm is low when it is compared to its cash flow. On the other hand, a high P/CF may suggest that a firm is not generating enough cash flow when compared to its peers. The price-to-book (P/B) ratio compares the market value of a company's stock to its book value.

74. C Chapter 4, Section 6.1.11

For a deed of variation to be valid, it must: relate to a valid will, intestate estate or a trust; be signed by all parties who would have benefited had the variation not been made (all of whom must be over 18 and must be of sound mind); be executed within two years of the death of the legator (the person who left the money); and not be made for any consideration (ie, no one should have received money or value as encouragement for them to sign).

75. A Chapter 5, Section 9.3.2

There is no income tax to pay on dividends from ordinary shares in VCTs. This relief is available on both newly issued and second-hand shares (ie, those bought on the stock exchange in the secondary market).

76. D Chapter 4, Sections 1.1 and 1.2.4

In the UK, an individual with earnings over £125,140 (after the deduction of the personal allowance) is an additional rate taxpayer. Above the dividend allowance (DA), dividends for an additional rate taxpayer are taxed at 39.35%.

77. C Chapter 2, Section 1.3.2

Liquidity ratios evaluate the trading risk of the company. This is the risk that, as a result of trading activities, the company becomes unable to pay its suppliers and ceases to exist as a going concern.

78. C Chapter 3, Section 1.2.1

The amount that needs to be invested today in order to obtain a targeted future sum is determined through discounting as follows:

$$PV = FV / (1 + r)^n$$

where PV is the present value, FV is the final value, r is the interest rate, and n is the number of periods over which we are compounding. In this case, the individual would today need to invest:

$PV = £5,000 / (1 + 0.035)^6 = £5,000 / 1.035^6 = £5,000 / 1.229 = £4,067.50$.

79. C Chapter 8, Section 2.3

The investor converts £50,000 into foreign currency (euros) and now has €60,000 (ignoring the bid/offer spread and commissions). This is invested in European shares, priced at €3 per share (ie, 20,000 shares are purchased).

After one year, the investor sells the shares at €3.20 per share, and receives €64,000 in return (ie, 20,000 shares x €3.20). This amount is converted to sterling at €1.30/£1, so the investor receives £49,231 (ie, €64,000 / €1.30). This equates to a loss of £769 (ie, £49,231 – £50,000).

80. D Chapter 1, Section 1.9.1

None of NS&I's products are subject to capital gains tax (CGT), but some are subject to income tax – for example, investment accounts, direct saver, income bonds and green savings bonds. All prizes from premium bonds are tax-free.

Syllabus Learning Map

Syllabus Unit/ Element		Chapter/ Section

Element 1	Asset Classes	Chapter 1
1.1	**Cash and Equivalents** On completion, the candidate should be able to:	
1.1.1	Understand the main types of deposit account: • current • instant access • notice • fixed rate • term • money market • National Savings & Investment (NS&I) products	1.9
1.1.2	Analyse the main characteristics, risks and returns of cash deposits: • liquidity • rates of interest • past returns • real returns • deposit takers • risks – inflation/deflation risk, interest rate risk and institutional risk • foreign currency deposits • costs, charges and penalties • requirement linked accounts • statutory protection, credit risk assessment of deposit-taking institutions and Financial Services Compensation Scheme (FSCS) limits	1
1.1.3	Analyse the main characteristics, risks and returns of money market funds: • cash assets only • near-cash assets • pricing, liquidity and fair value • costs, charges and penalties • constant NAV • low volatility NAV • variable NAV • accumulating NAV	1.10
1.1.4	Analyse the main characteristics, risks and returns of peer-to-peer lending	1.11

Syllabus Unit/ Element		Chapter/ Section
1.1.5	Analyse the factors to take into account when selecting between different types of cash deposits, accounts and money market funds: • entry requirements	1.9
1.2	**Foreign Exchange** On completion, the candidate should be able to:	
1.2.1	Understand the role, structure and main characteristics of the foreign exchange market: • OTC market • quotes, spreads and exchange rate information • market participants and access to markets • volume, volatility and liquidity • risk mitigation: rollovers and stop losses • regulatory/ supervisory environment	1.12
1.3	**Fixed-income securities** On completion, the candidate should be able to:	
1.3.1	Know the main issuing institutions and purposes for issuing fixed-income securities: • sovereign states and governments • public authority • corporate • credit institutions • supranational	2
1.3.2	Analyse the main sources of investment risk and return associated with fixed-income securities: • capital return • interest or yield • rates of interest • real returns • liquidity • credit ratings • credit enhancements • duration	2.8

Syllabus Unit/ Element		Chapter/ Section
1.3.3	Analyse the characteristics and differences between the main types of fixed-income securities: • fixed-rate bonds • floating rate notes (FRNs) • zero coupon bonds • inflation-linked bonds • asset-backed securities • convertible bonds • subordinated bonds • perpetual bonds • eurobonds and foreign issuer bonds • CoCos • sukuk • green bonds • blue bonds	2
1.3.4	Understand how fixed-income securities are traded and settled: • primary and secondary markets • decentralised market • retail bond markets • clearing, settlement and safe custody • pricing, liquidity and fair value • coupon • clean and dirty prices • transaction costs and charges	2.10
1.3.5	Understand the purpose and construction of the main bond indices, and the considerations needed for less liquid markets	2.11
1.3.6	Analyse the factors to take into account when selecting bonds and bond funds: • bond fund strategies • bond characteristics • direct bond strategies • indirect investment • advantages and disadvantages of investing in bonds and bond funds • bond market conditions • environmental, social and governance (ESG) factors	2.12

Syllabus Unit/ Element		Chapter/ Section
1.4	**Equities** On completion, the candidate should be able to:	
1.4.1	Understand the characteristics and differences between the main types of shareholder equity: • ordinary • redeemable • non-voting • preference • convertible preference	3
1.4.2	Understand the characteristics and differences between the main types of private equity share capital	3.3
1.4.3	Analyse the main sources of investment risk and return associated with equities: • capital return • dividends • liquidity • credit ratings • corporate actions • company liquidation • activist shareholders	3.4
1.4.4	Understand how equity securities are traded and settled: • market participants • liquidity, pricing and fair value • nominal value • market price • cum- and ex-dividend • transaction costs and charges	3.6
1.4.5	Understand the purpose and construction of the main equity indices, and the considerations needed for less liquid markets	3.7
1.4.6	Analyse equity securities and equity funds using the following valuation measures: • price-to-earnings (P/E) ratio • earnings per share • dividend yield • dividend cover • gearing • net asset value and enterprise value • past performance • price-to-cash flow (P/CF) ratio • price-to-book (P/B) ratio	Chapter 2, section 1.3

Syllabus Unit/ Element		Chapter/ Section
1.4.7	Analyse the factors to take into account when selecting equities and equity funds: • active equity fund strategies – growth, GARP, income, value • passive equity fund strategies – buy and hold, indexation, rebalancing • growth/dividend prospects • direct versus indirect investment • advantages and disadvantages of investing in equities and equity funds • turnover and ease of trading • equity market conditions • market capitalisation, sector, region, customised • environmental, social and governance (ESG) factors	3.8
1.5	**Trading Platforms** On completion, the candidate should be able to:	
1.5.1	Understand the issues involved in dealing for clients in equity markets: • recognised and designated investment exchanges • multilateral trading platforms • organised trading facilities (OTFs) • OTC trading • access to markets • principal and agency trading • quoted and unquoted securities • admission to trading	3.11
1.6	**Property** On completion, the candidate should be able to:	
1.6.1	Understand the differences, characteristics, risk and returns of the main property markets and sectors: • residential buy-to-let • commercial – retail space, hotel, office, industrial/warehouse • agricultural	4

Syllabus Unit/ Element		Chapter/ Section
1.6.2	Analyse the main sources of investment risk and return associated with property investment, both direct and indirect: • capital growth • yield • location and quality • occupancy rate • tenant creditworthiness, tenancy and rental agreement • term and structure of lease • asset liquidity • market volatility and risk • sector risk	4
1.6.3	Understand how the direct residential, commercial and agricultural property markets operate: • ownership and lease structures • conveyancing, buying and selling • costs – transactional, management • property valuation • finance and gearing	4
1.6.4	Analyse property and property funds using the following valuation measures: • cash flow and average yield • capitalisation rate • rental value and review • reversionary value • comparative analysis – market indices	4.7
1.6.5	Analyse the factors to take into account when selecting property and property funds: • property shares, OEICs, REITs, bonds, trusts, fund of funds, PAIFs, limited partnerships • relative merits of investing through open-ended and closed-ended vehicles • property fund strategies • growth/dividend prospects • direct versus indirect investment • pricing, liquidity and fair value • advantages and disadvantages of investing in property and property funds • environmental, social and governance (ESG) factors • market trends and current conditions	4.8

Syllabus Unit/ Element		Chapter/ Section
1.7	**Other Assets** On completion, the candidate should be able to:	
1.7.1	Understand the purpose, characteristics, risks and returns of the main types of alternative investments: • gold and other metals • commodities • art • antiques • land – agricultural and development • cryptocurrencies, non-fungible tokens (NFTs) and other digital assets	5
1.7.2	Analyse the factors to take into account when investing in alternative investments: • direct versus indirect investment • investment time horizon • transaction, delivery and ongoing costs • pricing, liquidity and fair value • advantages and disadvantages of investing in alternatives	5

Element 2	Fundamental Analysis	Chapter 2
2.1	**Company Analysis** On completion, the candidate should be able to:	
2.1.1	Understand statutory accounting requirements and the constituents of a set of accounts	1
1.4.6	Analyse equity securities and equity funds using the following valuation measures: • price-to-earnings (P/E) ratio • earnings per share • dividend yield • dividend cover • gearing • net asset value and enterprise value • past performance • price-to-cash flow (P/CF) ratio • price-to-book (P/B) ratio	1.3

Syllabus Unit/ Element		Chapter/ Section
2.1.2	Understand how to value and compare companies using: • accounting ratios • benchmarks • earning before interest taxes depreciation and amortisation (EBITDA) • return on capital employed (ROCE)	1.3
2.2	**Economics** On completion, the candidate should be able to:	
2.2.1	Understand fundamental economic concepts: • supply and demand • costs (average, marginal and total) • economies and diseconomies of scale • market structures • commonly used methods of assessing industries, companies and property investments • inequality of information • the function of the financial services industry in the economy	2
2.3	**Macro-economic Trends and Indicators** On completion, the candidate should be able to:	
2.3.1	Understand the main long-term global trends and the effects of technological changes/advancements: • ageing population • rising living standards • access to education • growth of the service sector • changing patterns of the economy • productivity of capital and labour • wealth and income distribution • growth of developing economies • natural resources • global health issues • social media, cyber security, e-commerce and artificial intelligence • climate change	3

Syllabus Unit/ Element		Chapter/ Section
2.3.2	Understand the impact of the following on global trade and asset classes: • international markets • trade agreements • tariffs • protectionism • globalisation of business and finance • market failures	4
2.3.3	Understand the main stages of economic, financial and stock market cycles, including: • trade cycles • business cycles • asset price bubbles • economic shocks • difficulty in forecasting national and international trends	5
2.3.4	Interpret key economic and business indicators: • gross domestic product (GDP) • inflation • interest rates • consumer price and inflation indices • retail sales • unemployment rate • industrial production • stock market indices • money supply changes • foreign exchange rates • leading, lagging and coincident indicators • procyclic and countercyclic indicators	6
2.4	**Fiscal and Monetary Policy** On completion, the candidate should be able to:	
2.4.1	Understand the role of government and central banks in fiscal and monetary policy: • interest-rate-setting process • quantitative easing and quantitative tightening • unwinding of central bank balance sheets • money market operations • fiscal stance • other interventions	7

Syllabus Unit/ Element		Chapter/ Section
2.4.2	Understand how the money supply affects: • inflation, deflation, disinflation • interest rates • exchange rates • relationship between money supply, inflation and employment	7.5
2.4.3	Understand the impact of budget surpluses and deficits on business and the economy	7.6
2.4.4	Understand the composition of the balance of payments, and the factors behind and benefits of international trade and capital flows: • current account • imports • exports	7.6
2.5	**Influences on Asset Classes** On completion, the candidate should be able to:	
2.5.1	Understand the role of financial investment in the economy: • primary markets as introducers of new capital to business and government • secondary markets enabling investors to adjust investments to meet individual needs	8
2.5.2	Analyse the impact of macro-economic influences on each of the following asset classes: • fixed income • commodities • cash • property • equities	7.7

Element 3	Principles of Investment Risk and Return	Chapter 3
3.1	**Time Value of Money** On completion, the candidate should be able to:	
3.1.1	Understand the effects of compound interest and the time value of money	1.1
3.1.2	Calculate the present value of: • lump sums • regular payments	1.2
3.1.3	Calculate the future value of: • lump sums • regular payments	1.3

Syllabus Unit/ Element		Chapter/ Section
3.1.4	Calculate real and inflation-adjusted returns: • nominal returns • real or inflation-adjusted returns • total returns	1.5
3.2	**Investment Risk and Return** On completion, the candidate should:	
3.2.1	Analyse and explain the main types of risk and the implications for investors: • systemic risk • systematic risk – asset price volatility, currency, interest rates, commodity price volatility • unsystematic risk – liquidity, gearing, counterparty risk • concentration and diversification – sector specific, country, emerging markets • market timing • ESG factor risk	2
3.2.2	Understand the main risk and return measures, and how they are used within asset and portfolio evaluation, and their purposes: • holding period return • total return and its components • standard deviation • volatility • correlation • risk-adjusted performance measurements • benchmarking • R-squared	2.4
3.2.3	Apply the theory of investment risk and return to the measurement of portfolio performance: • holding period return • relative return • risk-adjusted returns • synthetic risk and reward indicators	2.8
3.3	**Models of Investment Theory** On completion, the candidate should be able to:	
3.3.1	Understand the main propositions and limitations of the efficient markets hypothesis (EMH): • strong form • semi-strong form • weak form • assumptions and shortcomings	3.1

Syllabus Unit/ Element		Chapter/ Section
3.3.2	Understand the main principles of modern portfolio theory (MPT), the capital asset pricing model (CAPM), its application and limitations: • risk-free rate of return • risk premium • cost of capital and return on capital • excess returns • correlation measures • risk and diversification • efficient frontier, portfolio optimisation and leverage • assumptions and shortcomings	3.2
3.3.3	Understand the main principles behind arbitrage pricing theory (APT), its application and limitations: • factor structure and analysis • macro-economic and market factors • arbitrage theory and mechanics • relationship with CAPM • assumptions and shortcomings	3.4
3.3.4	Understand the principles of behavioural finance: • behavioural investor types • price reaction and price trends • barriers and biases – practical and psychological • relationship with EMH • assumptions and shortcomings	3.5
3.3.5	Understand the types and uses of multi-factor models, their assumptions and limitations	3.4
3.3.6	Understand how to reduce portfolio risk: • significance of alpha and beta • correlation and relative risk • principles of asset allocation • diversification, hedging and immunisation • active and passive strategies	3.6
6.2.1	Understand the aims and characteristics of the main fund management strategies and styles: • indexing or passive management • active or market timing • passive/active combinations • long, short and geared • quantitative, trend and trading strategies	3.6

Syllabus Unit/ Element		Chapter/ Section
3.4	**Statistical Analysis** On completion, the candidate should be able to:	
3.4.1	Understand data sampling and regression analysis: • source of data – primary and secondary sampling: continuous and discrete; categorical data; frequency and relative frequency distribution; presentation methods • summary data and linear regression – averages; arithmetic and geometric mean, mode and median; methods of dispersion standard deviation • correlation and linear regression	2.3

Element 4	Taxation of Investors and Investments	Chapter 4
4.1	**Income Tax** On completion, the candidate should be able to:	
4.1.1	Understand how a private individual's income tax liability is determined using: • tax rates • tax rate bands • personal allowances	1
4.1.2	Understand how the income tax liability for a trust is determined based on: • trust type • tax rates • tax rate bands	2
4.1.3	Understand the application of income tax in respect of: • individuals • trusts • charities	1, 2
4.2	**Taxation of Investment Income** On completion, the candidate should be able to:	
4.2.1	Understand the tax treatment of investment income: • savings income • dividend income • rental income	3.1
4.3	**National Insurance Contributions (NICs)** On completion, the candidate should be able to:	

Syllabus Unit/ Element		Chapter/ Section
4.3.1	Understand the basis on which National Insurance contributions (NICs) are levied: • employers • employees • self-employed • voluntary	4
4.4	**Capital Gains Tax** On completion the candidate should be able to:	
4.4.1	Understand the application of Capital Gains Tax (CGT) in respect of: • individuals • trusts • charities	5
4.4.2	Understand the application of CGT to the sale of assets, such as: • shares • government bonds • corporate bonds • real estate • chattels	5
4.5	**Inheritance Tax** On completion, the candidate should be able to:	
4.5.1	Understand the application of inheritance tax (IHT): • chargeable transfers • potential exempt transfers • transfers on death • nil rate band (NRB) • exemptions and reliefs • gifts with reservation • valuation of assets • deed of variation	6
4.5.2	Understand how intestacy rules may apply in England and Wales, and the implications of these rules for estate planning	6.2
4.5.3	Understand the application of inheritance tax (IHT) to: • transfers to trusts • assets held within trusts • transfers out of trusts	6.1.12
4.6	**Residence and Domicile** On completion, the candidate should be able to:	

Syllabus Unit/ Element		Chapter/ Section
4.6.1	Understand the impact of the rules on residency and domicile and the implications for income tax and CGT	7.1
4.6.2	Understand the use of double taxation treaties	7.2
4.6.3	Understand how withholding tax is applied based on: • residency • product • tax regime (at source or reclaimable) • beneficiary • qualified intermediaries scheme	7.3
4.6.4	Understand the impact of the rules on residency and domicile on the liability to inheritance tax (IHT)	7.1
4.7	**Stamp Duty and Stamp Duty Reserve Tax** On completion, the candidate should be able to:	
4.7.1	Understand the application of stamp duty and stamp duty reserve tax (SDRT) to the purchase of securities, including: • company shares • share options • unit trusts and open-ended investment companies (OEICs) • government bonds • corporate bonds • exchange-traded funds (ETFs)	8.1
4.7.2	Understand the application of stamp duty land tax (SDLT), including the main reliefs and exemptions, to the purchase of property	8.2
4.8	**Value Added Tax (VAT)** On completion, the candidate should be able to:	
4.8.1	Understand how liability to value added tax (VAT) arises and is charged	9
4.9	**Corporation Tax** On completion, the candidate should be able to:	
4.9.1	Understand how liability to corporation tax (CT) arises and is charged: • companies and organisations: trading, non-trading • taxable profits and accounting periods • rates, allowances and reliefs • taxation of franked income	10

Syllabus Unit/ Element		Chapter/ Section
4.10	**Tax Compliance** On completion, the candidate should be able to:	
4.10.1	Understand how tax is accounted for and an adviser's duties regarding tax compliance, avoidance and evasion	11
4.10.2	Understand the need to meet international disclosure requirements under FATCA, CRS and MDR	11
4.11	**Tax Planning** On completion, the candidate should be able to:	
4.11.1	Apply the key principles of investment tax planning: • use of personal allowances • spouses' and civil partners' personal allowances • children's tax position • pension contributions • use of tax wrappers • use of capital gains tax (CGT) exemptions • tax deferral • use of life assurance bonds	12.1
4.11.2	Analyse the criteria for selecting a tax planning strategy	12.2
4.11.3	Apply the key principles of IHT planning: • lifetime gifts • trusts • transferability of nil rate band (NRB)	12.3
4.11.4	Apply common tax computations for: • an individual's liability to income tax • CGT liability on share disposals • IHT liability on lifetime transfers and at death	12.3
4.11.5	Apply the above principles to basic recommendations relating to the taxation of investments and pensions	12.4

Element 5	Investment Products	Chapter 5
5.1	**Collective Investments** On completion, the candidate should be able to:	
5.1.1	Understand the main types, purposes, common investment characteristics and behaviours of funds, collectives and other products	1

Syllabus Unit/ Element		Chapter/ Section
5.1.2	Understand the tax treatment within the fund and for UK investors of income and capital gains arising from collective investments: • investment trusts • exchange-traded funds • open-ended investment companies (OEICs) • unit trusts	Chapter 4, section 3.2 & 5.3
5.1.3	Understand the main types, purposes, common investment characteristics and behaviours of: • onshore collective investment funds • offshore collective investment funds	4.1
5.1.4	Understand the tax treatment of UK investors investing in offshore funds, including: • differences between reporting funds and non-reporting funds • taxation of offshore funds	4.1
5.1.5	Analyse the charges and pricing of collective investments: • initial, annual, exit and performance fee charging structures • single pricing • bid/offer pricing • dilution levies • forward pricing/historic pricing	5
5.1.6	Analyse the relative merits and limitations of investing in a collective investment fund compared with other forms of direct and indirect investment, in terms of: • risk • return • tax treatment • turnover, liquidity and access • expenses – transaction and ongoing • management and administration	4
5.2	**Exchange-Traded Funds (ETFs) and Exchange-Traded Commodities (ETCs)** On completion, the candidate should be able to:	
5.2.1	Understand the main types, purposes, underlying structure, common investment characteristics of: • exchange-traded funds (ETFs) • exchange-traded commodities (ETCs)	2.5

Syllabus Unit/ Element		Chapter/ Section
5.2.2	Analyse the relative merits and limitations of investing in exchange-traded funds (ETFs) and exchange-traded commodities (ETCs) compared with other forms of direct and indirect investment, in terms of: • risk • return • physical versus synthetic • tax treatment • turnover, liquidity and access • expenses – transaction and ongoing • management and administration	2.5
5.3	**Closed-Ended Funds and Investment Companies** On completion, the candidate should be able to:	
5.3.1	Understand the main types, purposes, common investment characteristics and behaviours of: • onshore closed-ended funds and investment companies; investment trusts; real estate investment trusts • offshore closed-ended funds and investment companies	3
5.3.2	Understand when and why borrowing/gearing is used by closed-ended funds, and the benefits and risks associated with it	3
5.3.3	Analyse the relative merits and limitations of investing in closed-ended funds and investment companies compared with other forms of direct and indirect investment, in terms of: • risk • return • tax treatment • premiums and discounts • turnover, liquidity and access • expenses – transaction and administration • management and administration	3
5.4	**Individual Savings Accounts (ISAs)** On completion, the candidate should be able to:	

Syllabus Unit/ Element		Chapter/ Section
5.4.1	Analyse the key features, restrictions and tax treatment of ISAs and child trust funds (CTFs): • eligibility • eligible investments • subscriptions and additional subscriptions • transfers • withdrawals • use in investment and tax planning	6
5.5	**National Savings & Investments (NS&I)** On completion, the candidate should be able to:	
5.5.1	Analyse the key features, restrictions and tax treatment of National Savings & Investments (NS&I), premium bonds and investments: • use in investment and tax planning	6.4
5.6	**Life Assurance-Based Investments** On completion, the candidate should be able to:	
5.6.1	Analyse the key features, relative merits and limitations of investing in onshore and offshore life assurance-based investments compared with other forms of direct and indirect investment: • risk • return • tax treatment • turnover, liquidity and access • expenses – transaction and ongoing • management and administration	7
5.7	**Private Equity Funds** On completion, the candidate should be able to:	
5.7.1	Understand the main types, purposes, structures, tax treatment and investment characteristics of private equity funds	8
5.8	**Venture Capital Trusts (VCTs), Enterprise Investment Schemes (EISs) and Seed Enterprise Investment Schemes (SEISs)** On completion the candidate should be able to:	

Syllabus Unit/ Element		Chapter/ Section
5.8.1	Analyse the key features, relative merits and limitations of investing in venture capital trusts (VCTs), enterprise investment schemes (EISs) and seed enterprise investment schemes (SEISs) compared with other forms of direct and indirect investment: • partners/investors • crowdfunding • investment management • tax characteristics • past performance in terms of risk and returns • discounts and premiums • secondary market liquidity	9
5.9	**Derivative Instruments** On completion, the candidate should be able to:	
5.9.1	Understand the purposes, structure and risk/reward characteristics of the main types of financial derivatives pertaining to each main asset class: • futures • forward contracts • options • warrants • contracts for differences (CFDs)	10
5.9.2	Understand the effects of implementing simple derivatives strategies for the purposes of hedging or speculation in terms of: • risk transfer and risk/reward pay-off • transaction costs and margin • ease of implementation and unwinding	10
5.10	**Hedge Funds** On completion, the candidate should be able to:	
5.10.1	Analyse the key features, relative merits and limitations of investing in hedge funds compared with other forms of direct and indirect investment: • main types of hedge fund • regulatory environment • investment risk • use of short and long positions • custody and safekeeping practices • limitations in respect of voting capital • funds of hedge funds (FOHFs)	11
5.11	**Absolute Return Funds** On completion, the candidate should be able to:	

Syllabus Unit/ Element		Chapter/ Section
5.11.1	Analyse the key features, relative merits and limitations of investing in absolute return funds (ARFs) compared with other forms of direct and indirect investment: • structure • income and capital growth • investment risk and return • expenses • capital protection • monitoring performance versus benchmark	12
5.12	**Structured Products** On completion, the candidate should be able to:	
5.12.1	Analyse the key features, relative merits and limitations of investing in structured products and investment notes compared with other forms of direct and indirect investment: • structure (structured deposits and products) • income and capital growth • investment risk and return • expenses • capital protection • American and European soft protection • counterparty risk • differences between retail and private placement products	13
5.13	**Pension Arrangements** On completion, the candidate should be able to:	
5.13.1	Analyse the main types, purpose, structure and operation, tax treatment and investment characteristics of pension arrangements: • defined benefit • defined contribution • personal pensions • self-invested personal pensions (SIPPs) • small self-administered schemes (SSASs)	14
5.13.2	Analyse the key features of pension arrangements: • contributions – sources, level and limits • investment selection and performance • with-profit funds • how benefits are provided • annual allowance • fees	14

Syllabus Unit/ Element		Chapter/ Section

Element 6	Portfolio Construction and Planning	Chapter 6
6.1	**Asset Allocation** On completion, the candidate should be able to:	
6.1.1	Understand the purpose and principles of asset allocation: • relationship with investment theory • trade-off between risk and return • stochastic modelling • active and passive management • strategic asset allocation (SAA) • tactical asset allocation (TAA)	2
6.1.2	Understand how investment theory is applied to the process of portfolio construction	2
6.1.3	Understand the basic ways to diversify a portfolio: • asset class • geographical area • sector • currency • company size • management style • maturity and duration	2.7
6.1.4	Analyse combinations of asset classes based on: • historical returns • index and benchmark comparisons • correlation of performance between asset classes • advantages and limitations of relying on historical data	2.8
6.2	**Investment Selection** On completion, the candidate should be able to:	
6.2.1	Understand the aims and characteristics of the main fund management strategies and styles: • indexing or passive management • active or market timing • passive/active combinations • long, short and geared • quantitative, trend and trading strategies	Chapter 3 Section 3.6
6.2.2	Analyse and compare charges and costs on the basis of impact, reduction in yield, total expense ratios/ongoing charges and annual management charge	3.1

Syllabus Unit/ Element		Chapter/ Section
6.2.3	Know the research and reports available to financial advisers: • fundamental analysis • technical analysis • fund analysis • fund rating agencies and screening software • broker and distributor reports • sector-specific reports	3.2
6.2.4	Analyse the factors to consider when selecting investment product providers	3.3
6.2.5	Understand the characteristics, uses, benefits, risks and charges associated with wraps and other platforms	3.4

Element 7	The Process of Giving Investment Advice	Chapter 7
7.1	**Advising Clients** On completion, the candidate should be able to:	
7.1.1	Apply a framework for providing financial advice, paying particular attention to: • the nature of the client relationship, confidentiality, trust and client protection • the information required from clients and methods of obtaining it • monitoring and review of clients' circumstances and protection requirements • the information clients must be given under the current regulatory requirements • additional requirements needed when advising on unregulated retail products • later life planning • specific obligations for vulnerable clients	1
7.1.2	Understand how financial advice can be paid for: • adviser charging • commission • nature and frequency of service to be provided (including discretionary and non-discretionary portfolio management)	1.9
7.1.3	Apply the FCA's Consumer Duty and the four outcomes that firms should achieve in supporting the requirements of Principle 12	1.8
7.1.4	Understand the purpose, merits and limitations of using questionnaires and interviews to elicit customer information	1
7.1.5	Understand the purpose, merits and limitations of using a robo-advisor	1.7

Syllabus Unit/ Element		Chapter/ Section
7.2	**Client Fact Finding** On completion, candidates should be able to:	
7.2.1	Analyse the main factors, resources and limitations shaping a client's current and desired financial circumstances: • gather appropriate, relevant information about current and projected income, expenditure, debt and savings, state benefit • consider time horizons and the relative balance of growth versus income • agree clear, feasible, prioritised investment objectives	1.10
7.3	**Risk and Client Portfolio Suitability** On completion, candidates should be able to:	
7.3.1	Interpret a profile of a client's risk exposure and appetite for risk, based on the following objective and subjective factors: • level of wealth • timescale • commitments • lifecycle • life goals • investment objectives • attitudes and beliefs • experiences • knowledge • capacity for loss • shortfall risk	2.2
7.3.2	Apply a client risk profile to the investment selection process	2.2
7.3.3	Assess the following factors when selecting suitable product solutions: • impact of new solutions on existing arrangements • range of solutions available to suit different circumstances • range of criteria for matching solutions to client needs and demands • discounting alternatives	5.4
7.3.4	Assess affordability and suitability based on a range of factors including product provider quality, performance, risk, charges and client service	2.7
7.3.5	Understand environmental and social governance, and socially responsible investment strategies, their purpose and the circumstances in which it may be appropriate to discuss them	3

Syllabus Unit/ Element		Chapter/ Section
7.3.6	Understand the main considerations for investing in accordance with faith values, including Shariah law	3.3
7.3.7	Understand the main considerations that should be taken into account when investing for charities	3.4
7.3.8	Understand the main considerations that should be taken into account when investing for trusts	3.5
7.3.9	Analyse the merits and disadvantages of paying off mortgage or debt compared with investing surplus funds	4
7.4	**Planning and Recommendations** On completion, the candidate should be able to:	
7.4.1	Apply a strategy and rationale that will meet the client's objectives: • highlight the pertinent issues and priorities • formulate a plan to deal with them • offer proposals to achieve these objectives • explain clearly the relative merits and drawbacks of each proposal and combination thereof • agree a strategy that the client understands and accepts	2.3
7.4.2	Apply an appropriate investment allocation strategy that best meets the following criteria: • client's financial objectives and priorities • client's risk tolerance • appropriate fees and charges • portfolio turnover ratio (PTR) • client suitability requirements • adequate diversification and correlation benefits • additional risk, timing and liquidity factors where asset accumulation and decumulation are relevant features	5
7.4.3	Understand the factors which influence the way in which recommendations are presented	6
7.4.4	Understand how to check clients' understanding of recommendations	6.1
7.4.5	Apply consumer rights and the regulatory requirements to the provision of investment advice	7

Syllabus Unit/ Element		Chapter/ Section
7.4.6	Assess the factors influencing the choice of benchmark and the basis for review: • portfolio's asset allocation • risk/return profile • alternative investments • taxation • peer groups • maintenance of capital value	8
7.4.7	Understand the process of periodic review to meet key criteria: • regulatory requirements • appropriate frequency, taking into account client requirements and the chosen investment strategy	1.10

Element 8	Portfolio Performance and Review	Chapter 8
8.1	**Selection and Use of Benchmarks** On completion, the candidate should be able to:	
8.1.1	Understand the purpose and limitations of portfolio evaluation	1
8.1.2	Understand the concept and purpose of benchmarking: • global investment performance standards (GIPS) • MSCI PIMFA wealth management benchmarks • peer group average (WM and CAPS)	1
8.1.3	Know the construction and weighting methods of the following indices: • FTSE 100 • FTSE All-Share Index • FTSE Actuaries UK Gilts Index Series • MSCI World Index • Dow Jones Industrial Average Index • S&P 500 Index • Nikkei 225 • responsible and sustainable indices	1.2
8.1.4	Apply suitable benchmarks when measuring and evaluating investment performance	1

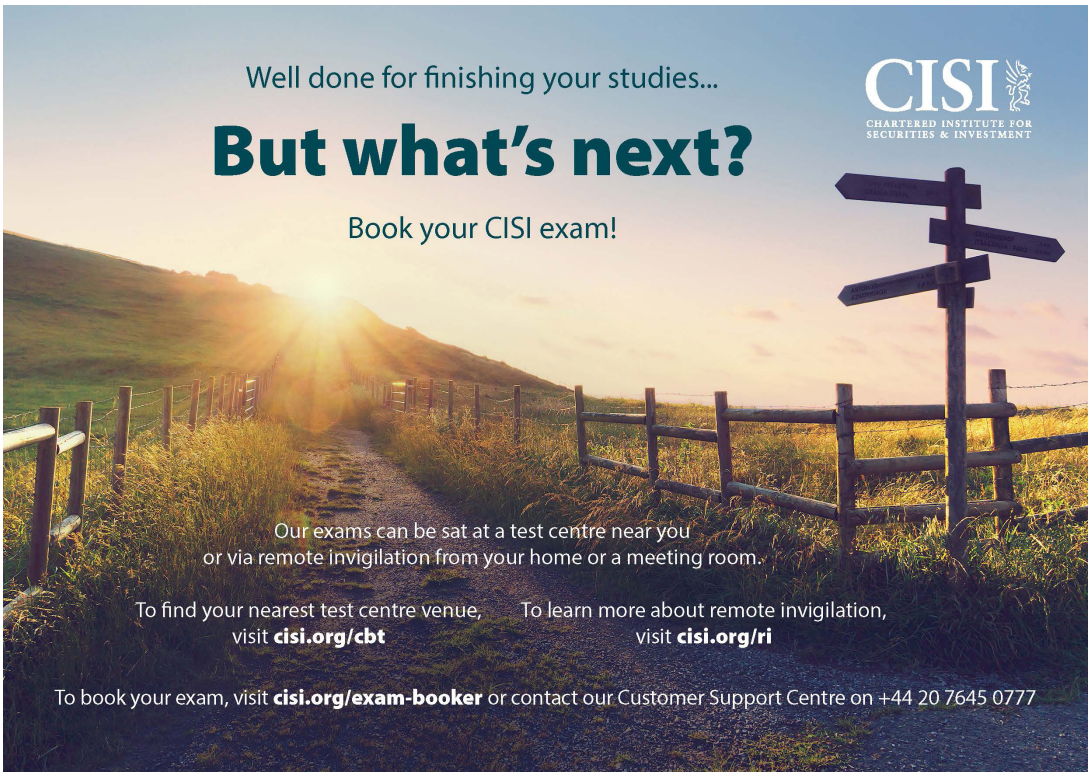
Syllabus Unit/ Element		Chapter/ Section
8.2	**Portfolio Appraisal** On completion, the candidate should be able to:	
8.2.1	Analyse portfolio performance in terms of: • absolute and relative return • absolute and relative risk • risk/reward ratios • contributions to return arising from asset allocation, currency movements, stock selection and timing • impact of new money and timing factors	2
8.3	**Portfolio Review** On completion, the candidate should be able to:	
8.3.1	Understand the importance of regularly reviewing the client's portfolio	3
8.3.2	Apply measures to address the factors that require attention as part of the portfolio review and administration process: • changes in client circumstances • changes in the financial environment • new products and services available • administrative changes or difficulties • investment-related changes (eg, credit rating, corporate actions) • portfolio rebalancing • benchmark review	3

Examination Specification

Each examination paper is constructed from a specification that determines the weightings that will be given to each element. The specification is given below.

It is important to note that the numbers quoted may vary slightly from examination to examination as there is some flexibility to ensure that each examination has a consistent level of difficulty. However, the number of questions tested in each element should not change by more than plus or minus 2.

Element Number	Element	Questions
1	Asset Classes	13
2	Fundamental Analysis	6
3	Principles of Investment Risk and Return	9
4	Taxation of Investors and Investments	16
5	Investment Products	13
6	Portfolio Construction and Planning	5
7	The Process of Giving Investment Advice	13
8	Portfolio Performance and Review	5
Total		80



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Understand AML legislation and regulation, the role of the MLRO, and the sanctions and penalties.



Client Assets and Client Money Essentials
Gain an overview of the principles and high-level rules associated with holding and protecting client assets.



Conflicts of Interest
Consider examples of conflicts of interest, tools, policies and procedures, enforcement action, and good practice.



Data Science
Digitisation of business operations has accelerated the speed of data capture. Harness the value of your data.



Diversity and Inclusion
Targeted at those responsible for diversity, equality and anti-discrimination, and those recruiting and managing.



Financial Crime
Gain an overview of insider dealing, market abuse, money laundering, terrorist finance and financial sanctions.



Financial Planning
Gain an overview of the financial planning process, key terms and the regulatory framework that governs it.



Greenwashing
This module explores the key concepts surrounding greenwashing, the wider implications, and the measures being taken to fight it.



Impact Investing
Aim to take ethical and sustainable investment principles a step further through intentional investment.



Integrity and Ethics
Understand ethics in finance, the importance of trust and trustworthiness, and compliance versus ethics.



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Examine offences, penalties, safe harbours, reporting obligations and the relationship with other offences.



Neuroscience at Work
Learn how to work optimally without harming your health when faced with increased workloads and deadlines.



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