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Diploma in
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Financial Reporting and Financial Statements Analysis

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This workbook relates to syllabus
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12 March 2026 to 11 March 2028

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Workbook version: 2.1 (January 2026)

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The Income Statement.

1

The Statement of Financial Position.

2

The Cash Flow Statement and Free Cash Flows.

3

Group Accounting

4

Financial Analysis

5

Glossary

Multiple Choice Questions

Syllabus Learning Map

It is estimated that this manual will require approximately 60 hours of study time.

What next?

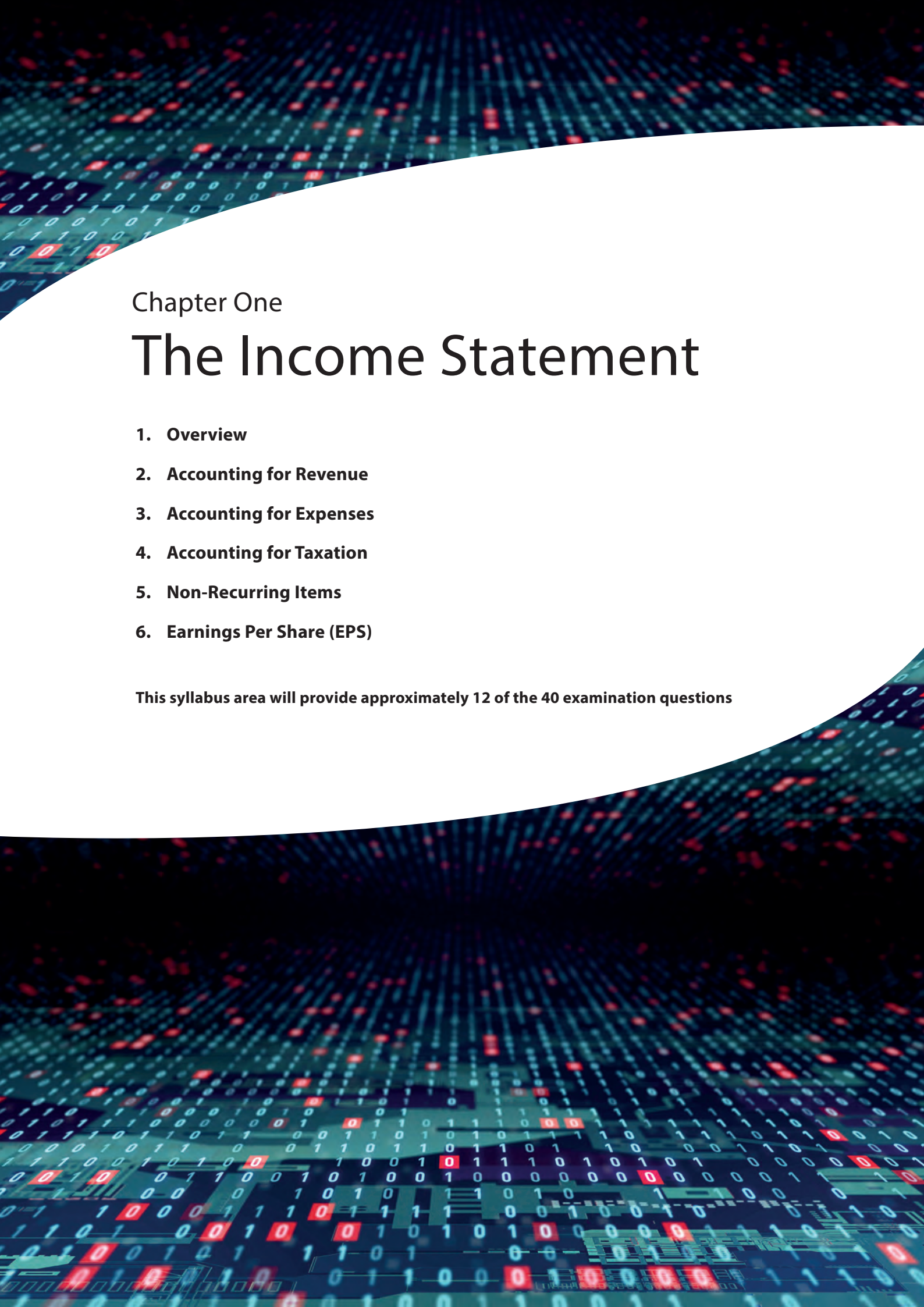
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The background of the slide is an abstract digital pattern. It features a dark blue and black background with a grid of glowing red and white dots, resembling a stylized binary code or a data visualization. The pattern is curved and flows across the slide, creating a sense of depth and movement.

Chapter One

The Income Statement

1. Overview
2. Accounting for Revenue
3. Accounting for Expenses
4. Accounting for Taxation
5. Non-Recurring Items
6. Earnings Per Share (EPS)

This syllabus area will provide approximately 12 of the 40 examination questions



1. Overview

1.1.1 Understand the purpose, format and main contents of the income statement

1.1 Purpose of the Income Statement

The income statement forms an integral part of a company's financial statements, which are presented within its annual report. The annual report serves as a comprehensive communication tool, outlining the organisation's financial and non-financial performance, strategic direction, and principal risks, among other information, and is issued on an annual basis. The financial statements comprise the income statement, statement of financial position, cash flow statement, and accompanying notes, which provide further detail and context.

Most jurisdictions require that organisations prepare and present their financial statements and make them available to relevant parties. For example, public limited companies should make financial statements available to shareholders, finance providers like banks, their employees and governments. Regulators want the financial statements to be relevant, understandable, comparable between companies, complete with all relevant information, and to faithfully represent what has happened during the period. The way that regulators ensure this is to require organisations to present their financial statements in accordance with accounting standards.

Most accounting standards in countries around the world draw heavily from International Financial Reporting Standards or IFRS® Accounting Standards. The International Financial Reporting Standards Foundation or IFRS Foundation develops and publishes both accounting and sustainability standards for jurisdictions to adopt in their own country. IFRS Accounting Standards are named, for example, IFRS 1 and IFRS 2. Older accounting standards which were issued by the predecessor organisation and adopted by

the IFRS Foundation are called International Accounting Standards (IAS) and are named, for example, IAS 1 and IAS 2. There is no difference in the importance of IFRSs versus IASs. Eventually, all of the old IASs will be replaced by a new IFRS.

There are alternative accounting standards adopted in some jurisdictions, the most notable being US GAAP (generally accepted accounting principles) in the United States of America.

The purpose of the income statement, sometimes called the statement of profit or loss, is to show a company's financial performance over a period of time, normally one year. It includes the **income** that the company has earned during the period and deducts the expenses it has incurred. The remaining profit (if income exceeds expenses) or loss (if expenses exceed income) belongs to the company's owners or shareholders. Some of the residual profit may be distributed to the company's owners or shareholders in the form of a **dividend**. Some of the profit may be retained to grow the business and this is reflected in retained earnings in the statement of financial position (see chapter 2).

Since the Income Statement is such an important part of a set of financial statements, it is usually shown as the first of the financial statements in the annual report.

1.1.1 Format of the Income Statement

The format of the income statement can vary but generally follows the presentation below.

Example – Income Statement: Expenses classified by function

	20X4	20X3
Revenue	120,000	105,000
Cost of sales	(85,000)	(73,000)
Gross profit	35,000	32,000
Other income	1,000	5,000
Distribution costs	(4,000)	(3,000)
Administrative expenses	(23,000)	(19,000)
Other expenses	(2,000)	(3,000)
Profit before interest and tax	7,000	12,000
Investment income	1,000	500
Finance costs	(2,500)	(1,450)
Profit before tax	5,500	11,050
Income tax expense	(1,000)	(2,300)
Profit for the year	4,500	8,750

In the year 20X4, this fictional company increased its revenue by 14.3% from a year earlier ($(120,000 - 105,000) / 105,000 \times 100\%$), but its profit for the year actually fell from £8,750 to £4,500. The reasons for this and how to 'tell the story' from the numbers in the income statement will be considered in chapter 5.

The format above shows expenses in the income statement classified by function: cost of sales (such as raw materials and the salaries of advertising executives); distribution (transport costs); and administrative expenses (utilities such as gas, electricity, and managers' salaries). An alternative presentation is to classify expenses by their nature (eg, purchases of materials, transport costs, employee salaries, and **depreciation** of fixed **assets**). Both presentations are acceptable, so you may see either.

Example: Next's Income Statement (Expenses classified by function)

CONSOLIDATED INCOME STATEMENT			
	Notes	52 weeks to 25 January 2025 £m	52 weeks to 27 January 2024 £m
Continuing operations			
Revenue (including credit account interest)	1, 2	6,118.1	5,491.0
Cost of sales		(3,456.5)	(3,034.5)
Impairment losses on customer and other receivables	14	(19.4)	(36.0)
Gross profit		2,642.2	2,420.5
Distribution costs		(878.8)	(794.1)
Administrative expenses		(670.6)	(657.7)
Other gains	3	3.4	12.3
Trading profit		1,096.2	981.0
Share of results of associates and joint ventures	13	6.7	6.9
Impairment in associates and joint ventures	13	(13.0)	-
Curtailement loss - exceptional items	6	(14.5)	-
Operating profit	3	1,075.4	987.9
Gain on Reiss transaction - exceptional items	6	-	108.6
Finance income	5	8.2	6.8
Finance costs	5	(96.6)	(87.5)
Profit before taxation		987.0	1,015.8
Taxation	7	(243.8)	(215.3)
Profit for the year		743.2	800.5
Profit/(loss) attributable to:			
- Equity holders of the Parent Company		736.1	802.3
- Non-controlling interests		7.1	(1.8)
		743.2	800.5
Earnings Per Share			
Basic	9	615.1p	661.6p
Diluted	9	605.5p	655.9p

Notes 1 to 36 are an integral part of these consolidated financial statements.

Source: <https://www.nextplc.co.uk/~media/Files/N/next-plc-v4/about-next/annual-report-and-accounts-jan-2025.pdf> (2025: page 168)

The above example shows that Next chooses to present its expenses by their function, in line with many companies. You can see that Next's published financial statements for 2025 follow the same broad format as the example above. The profit for the year ended 25 January 2025 is split between **equity** holders of the **parent** company (ie, shareholders of Next plc, and **non-controlling interests (NCI)**). The reason for this will be explored in chapter 4. We will also consider share of results of associates and joint ventures in chapter 4.

Earnings per share is a key item in the financial statements that investors and analysts pay close attention to. The means of calculating it will be explored in section 6.

1.1.2 Main Contents of the Income Statement

The income statement must show the profit or loss for the period. If the accounts are for a group, this profit or loss must be split regarding who it belongs to ie attributable to non-controlling interests and owners of the parent company.

Line items typically seen in the income statement include:

- Revenue.
- Interest income, ie, finance income.
- Finance costs ie interest payable.
- Share of profit or loss of **associates**.
- Tax expense.
- Total profit or loss for discontinued operations.

2. Accounting for Revenue

1.2.1 Understand the principles of revenue recognition (IFRS15): identification of contracts; identification of performance obligations; determination of transaction price; allocation of the price to performance obligations; recognition of revenue when/as performance obligations are satisfied; the impact of revenue recognition policies on benchmarking

2.1 Revenue Recognition

A specific accounting standard, IFRS 15: Revenue from Contracts with Customers, governs when companies may recognise revenue. There are strict accounting rules over its recognition because it is such an important figure in the financial statements and results can be changed significantly by recognising more or less revenue in the reporting period. Generally, revenue should be recognised when there is evidence of the transfer of **control** of goods or services to the customer.

Income, as defined by the IFRS Framework document, includes both revenues and gains. Revenue is income arising in the course of an entity's ordinary activities and it may be called different names, such as sales, fees, interest, dividends or royalties. The sale of a rare book is the ordinary activity of a bookseller but is not for a car manufacturer.

2.1.1 Definitions

The following definitions are given in IFRS 15:

- Income represents increases in economic benefits during the accounting period, in the form of inflows or enhancements of assets or decreases of liabilities, that result in an increase in equity, other than those relating to contributions from equity participants.
- **Transaction price** is the amount of consideration to which an entity expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties (IFRS 15).

Amounts collected on behalf of third parties, which are not included in the transaction price, include sales taxes, value added taxes or goods and service taxes, because these do not represent an increase in economic benefits for the entity. For example, in the UK, value added tax (VAT) is added to chargeable goods and services at 20% and companies collect this on behalf of the tax authority. VAT is not income for the companies involved.

2.1.2 IFRS 15 Five Step Model

Following a large number of high profile instances of fraud involving revenue recognition, IFRS 15 only recognises revenue when goods and services are transferred to a customer, evidenced by the transfer of control.

Revenue is recognised in accordance with this core principle by applying a five-step model.

2.1.3 The Five Step Model for Revenue Recognition

1. Identify the contract with the customer	• The parties to the contract have approved the contract (in writing, verbally or implied acceptance through customary business practices). • The contract clearly identifies each party's rights and payment terms. • The contract has commercial substance. • It is probable (more likely than not) that the entity will collect the consideration to which it will be entitled in exchange for goods or services transferred to the customer.
2. Identify the performance obligations in the contract	• A distinct good or service. • A bundle of goods and services. • A series of distinct goods or services.

3. Determine the transaction price	• The transaction price is the total amount of consideration receivable, including: ◦ fixed consideration ◦ variable consideration, eg, discounts or penalties for late delivery ◦ contingent consideration based on an uncertain future event, eg, a performance bonus on early completion. • The transaction price should be based on the most likely amount (if there are two possible outcomes) or an expected value. • Consideration that is contingent on an uncertain future event should be included only if it is highly probable that there will not be a reversal of revenue.
4. Allocate the transaction price to the performance obligations	• The overall transaction price is allocated to each distinct performance obligation based on their individual selling prices. • If an entity sells goods and services together as a package (for example a software licence with two years of technical support), the transaction price is allocated to the separate performance obligations in proportion to their stand-alone selling prices. • If the total transaction price is less than the total stand-alone selling prices, the discount is allocated to each performance obligation based on the relative stand-alone selling prices.
5. Recognise revenue when (or as) a performance obligation is satisfied	• A performance obligation is satisfied when the control of goods or services has transferred to the customer. This can happen: ◦ at a point in time (typically the transfer of goods when control is transferred), or ◦ over a period of time (typically for services rendered).

Case Study

The extract below is from the 2025 Annual Report of Tesco plc, a food and grocery retailer, and gives the group's revenue recognition policy.

Tesco Revenue Recognition Policy

Revenue is income arising from the sale of goods and services in the ordinary course of the Group's activities, net of value added taxes. Revenue is recognised when performance obligations are satisfied and control has transferred to the customer. For the majority of revenue streams, there is a low level of judgement applied in determining the transaction price or the timing of transfer of control.

Sale of goods

The sale of goods represents the vast majority of the Group's revenue. For goods sold in store, and fuel, revenue is recognised at the point of sale. For online or wholesale sales of goods, revenue is recognised on collection by, or delivery to, the customer. Revenue is reduced by a provision for expected returns (refund liability). An asset and corresponding adjustment to cost of sales is recognised for the Group's right to recover goods from customers.

Clubcard (customer loyalty programme)

Clubcard points issued by Tesco when a customer purchases goods are a separate performance obligation providing a material right to a future discount. The total transaction price (sales price of goods) is allocated to the Clubcard points and the goods sold based on their relative standalone selling prices, with the Clubcard points' standalone price based on the value of the points to the customer, adjusted for expected redemption rates (breakage). The amount allocated to Clubcard points is deferred as a contract liability within trade and other payables. Revenue is recognised as the points are redeemed by the customer. Revenue related to breakage is recognised in line with redemptions, subject to the variable consideration constraint (ie, provided it is highly probable not to result in a significant reversal of the cumulative revenue recognised), with the remainder recognised on expiry of the points.

Source: https://www.tescopl.com/media/ky0bfwpo/tesco_ar25_interactive.pdf (2025: page 141)

2.1.4 Deferred Consideration

If the parties to the contract agree that consideration is deferred to a later date, or an entity offers a period of 'interest-free credit', the contract contains a significant financing component. In this case, the transaction price has two elements that must be recognised separately.

The revenue recognised when the control of goods or services is transferred to the customer must be the amount that reflects the price that the customer would have paid for the goods or services if the customer had paid **cash** for those goods or services when they transferred, ie, the cash selling price.

The revenue is separated into:

- the cash selling price, recognised on transfer of control, and
- financing income, recognised over the credit period.

Example

On 1 January 20X4, a furniture company sells a large corner sofa to a customer for £5,000, which the customer has delivered on the same day. The furniture company states it has a '2-year interest-free period' so the customer will pay for the sofa in full on 1 January 20X6.

The company's relevant discount rate is 5%.

How much revenue may the furniture shop recognise on 1 January 20X4?

Revenue must be recognised at the equivalent cash selling price, excluding the financing element. The equivalent cash selling price is the present value of the £5,000 to be received in 2 years' time.

$$\begin{aligned}\text{Cash equivalent price} &= £5,000 \times (1 / (1.05)^2) \\ &= £5,000 \times 0.907 \\ &= £4,535\end{aligned}$$

The cash equivalent price is £4,535 therefore this is the revenue recognised on 1 January 20X4.

The difference of £465 (5,000 – 4,535) is interest income that the furniture shop will recognise spread over the two years of the year ending 31 December 20X4 and the year ending 31 December 20X5.

Tutorial note: the interest income of £465 is not spread equally but is calculated using the effective interest method.

Year ending 31 December 20X4: Interest income = $4,535 \times 5\% = £227$

Year ending 31 December 20X4: Receivable in the statement of financial position = $4,535 + 227 = £4,762$

Year ending 31 December 20X5: Interest income = $4,762 \times 5\% = £238$

Year ending 31 December 20X5: Receivable in the statement of financial position = $4,762 + 238 = £5,000$

2.1.5 Revenue Recognition Policies and Benchmarking

While the accounting rules for recognising revenue are strict, companies still exercise an element of judgment and discretion in how they apply these rules. Because of these differences, revenue figures may not be directly comparable across companies, even within the same industry. This is particularly important to appreciate when benchmarking between companies.

Benchmarking is the process of comparing the performance, practices, or financial results of one organisation against those of its peers – typically within the same industry or sector – to evaluate relative efficiency, effectiveness, and competitiveness. Different revenue recognition policies, particularly for different types of revenue, can affect benchmarking between companies.

For example, companies often must estimate discounts, rebates, or returns and more conservative estimates versus more aggressive estimation policies will inflate or defer reported revenue. Similarly, some firms recognise revenue at a point in time (eg, upon delivery of goods), while others may recognise it over time (eg, for longer contracts or subscription models).

Differences in revenue recognition policies can significantly affect reported revenue, margins, and growth, reducing comparability across companies.

Effective benchmarking therefore requires a detailed understanding of each entity's accounting judgments, including their contract structures, and timing assumptions. Particular caution is required when comparing companies from different jurisdictions or at different stages of IFRS adoption.

2.2 Recognising Revenue Over a Period of Time

1.2.2 Know the criteria for recognising revenue where performance obligations are met over a period of time

If the control of goods or services is transferred to the customer over time, eg, advertising services or construction of a golf course, revenue is recognised based on the stage of completion.

The stage of completion can be based on:

- output methods (the value to the customer of the goods or services transferred to date relative to the remaining goods or services promised in the contract), or
- input methods (the entity's efforts or inputs to the satisfaction of the **performance obligation** to date, eg, costs incurred to date relative to total costs).

Example

Suppose that a contract to construct an office building is started on 1 January 20X4, with an estimated completion date of 31 December 20X5. The final contract price is £1,500,000.

In the first year ending 31 December 20X4:

- Costs incurred amounted to £400,000.
- Half the work on the contract was completed.
- Certificates of work completed have been issued to the value of £750,000. (Note: It is usual in a construction contract for a qualified person, such as an architect or engineer, to inspect the work completed, and if it is satisfactory, to issue certificates. This will then be the notification to the customer that progress payments are now due to the contractor. Progress payments are commonly the amount of valuation on the work certificates issued, minus a precautionary retention of 10%.)
- It is estimated with reasonable certainty that further costs to completion in 20X5 will be £600,000.

Task

How much revenue is recognised by the contractor in the year ended 31 December 20X4?

Solution

On 31 December 20X4, revenue can be recognised based on the stage of completion.

Output method

Based on the output method, 50% ($£750,000 / £1,500,000$) of the work has been certified as completed. This is the sales value of the work completed to date.

Therefore, 50% of revenue can be recognised. $50\% \times £1,500,000 = £750,000$.

Profit would be revenue of £750,000 minus costs to date of £400,000 giving £350,000 profit.

Input method

Based on the input method, 40% ($£400,000 / (£400,000 + £600,000)$) of total costs have been incurred to date.

Therefore 40% of revenue can be recognised. $40\% \times £1,500,000 = £600,000$.

Profit would be revenue of £600,000 minus costs to date of £400,000 giving £200,000 profit.

It is important to note that the overall profit on the contract is £500,000 ($£1,500,000 - (£400,000 + £600,000)$) over the two-year period.

The method of recognising revenue based on the output or input method simply changes the amount of revenue recognised in Year 1 with the remainder of the total profit of £500,000 recognised in Year 2.

2.3 Specific Examples of Revenue Recognition

1.2.3 Know the characteristics of the following types of transaction: principal versus agent; repurchase agreements; bill and hold arrangements; consignment arrangements

2.3.1 Principal Versus Agent

Company A must decide whether it is acting as the principal party to a sale of goods or services or as an agent for another party, Company B. If Company A is a travel agent which arranges holidays for the general public, the sale of flights is made by the airline (Company B) rather than the travel agent. Therefore, the travel agent is the 'agent' under IFRS 15 and should only recognise its commission as revenue rather than the full holiday price.

The principal is the party that controls the goods or services that are sold to the customer. The agent is the party that simply arranges the sale.

This arrangement can affect comparability between similar companies. For example, Company A sells books and acts as principal because it holds the inventory of books, is responsible for pricing them appropriately and deals with all customer queries. Company B may appear to be a similar company, however, its sole responsibility is the online sale of books on behalf of a third party. The third party is clearly identified as the owner of the books, rather than Company B, the payments are between the third party and the end consumer and Company B earns 5% commission. It would be incorrect to directly compare Company A and Company B. Company A bears more risk and potentially higher returns than Company B and both companies recognise revenue differently from each other.

2.3.2 Repurchase Agreements

A repurchase agreement is a contract in which Company C sells an asset to Company D and at the same time is contractually obliged, or has an option, to buy it back in the future.

There are three situations that can arise:

1. Company C is obliged to repurchase the asset because it enters into a forward agreement to repurchase the asset which is legally binding.
2. Company C has the right, but not the obligation, to repurchase the asset.
3. Company D has the right, but not the obligation, to force Company C to repurchase the asset.

In situations 1 and 2, Company D does not have control over the use of the asset because Company C has an obligation or a right to repurchase it. Therefore, this is not a sale as control of the asset has not transferred to Company D and no revenue should be recognised by Company C. Instead, this is a financing arrangement whereby Company C borrows money from Company D, uses the asset as security and repays the amount of money in the future, which represents the loan and interest which has accrued.

In situation 3, Company C must look at the incentive for Company D to exercise its option and force Company C to repurchase the asset. The likelihood of this happening is dependent on the repurchase price versus the expected market price at the time of repurchase and the amount of time until the right expires. For example, if the repurchase price is expected to significantly exceed the market value of the asset, Company D is more likely to exercise its option to force Company C to buy it back at a higher price. If the repurchase price is expected to be significantly lower than the market value of the asset, Company D is less likely to exercise its option and the sale will result in control of the asset transferring to Company D. In this latter case, if control of the asset is likely to transfer to Company D, Company C may recognise revenue on the sale.

2.3.3 Bill and Hold Arrangements

Company E may bill a customer for an item but not deliver it until a later date. This could be because the customer does not have space for the item or is not yet ready for it. The issue here is whether Company E can recognise any revenue because it is difficult to show that control of the item has transferred to the customer.

Some criteria to show that revenue may be recognised include:

- The customer has requested the bill-and-hold arrangement.
- The item is identified separately as belonging to the customer.
- The item is ready to be transferred to the customer.
- Company E may not use the product or sell it to another customer.

2.3.4 Consignment Arrangements

Car manufacturers often sell cars through car dealerships. When the cars are delivered to the car dealership, they may be under a consignment arrangement. In this case, the manufacturer controls the car until it is sold to a customer, the manufacturer may require the return of the car from the dealership, and the car dealership does not have an unconditional obligation to pay for the car.

Therefore, the delivery of cars by the manufacturer to the car dealership is not a sale. The sale occurs when a car is sold to a third-party customer. Therefore, revenue can only be recognised by the manufacturer when the sale to a customer takes place.



2.4 Reporting Deferred and Accrued Income

1.2.4 Understand the nature of reporting deferred and accrued income and the differences between the two

We can make a distinction between ‘accrued’ and ‘deferred’ income. Both types of income are an application of the ‘accruals’ concept of accounting and relate to scenarios where cash is received by an entity in a different period to where it is actually earned.

Accrued income arises when revenue or other income has been earned by an entity but is not yet received as cash. The company concerned will include this income as part of its income statement for the year and show a corresponding receivable in its statement of financial position. To show accrued income, the company must be confident that the cash will actually be received; if this subsequently is in doubt, then a bad debt must be reflected, giving an expense in the income statement and removing the receivable in the statement of financial position.

A distinction can be drawn with **deferred income** which is income where the cash has been received but the revenue or other income has not yet been earned by the company. For instance, an upfront payment has been made by a customer to a company for a service to be performed by the company in a future accounting period. Following the accruals concept, no entry should be made in the company’s income statement for the period as the income has not yet been ‘earned’. Instead, cash is increased in the statement of financial position and a corresponding payable entry is given within liabilities. This payable is usually shown within **current liability** payables under the heading ‘accruals and deferred income’. In subsequent accounting periods, when the revenue is earned, there will be a reduction in the deferred income **liability** and a corresponding increase in income in the income statement.

The main issue with accrued and deferred revenue is that the revenue reported in the income statement may not represent the cash received during the current year. Revenue always represents the income earned during the year.

	Accrued income	Deferred income
Definition	Revenue has been earned but is not yet received as cash	Cash has been received but the revenue has not yet been earned (there has been an upfront payment)
Accounting treatment: income statement	Recognise revenue	No recognition of revenue

Accounting treatment: statement of financial position	Show a receivable	Cash increases current assets Deferred income increases current liabilities
Other points	Recognise a bad debt immediately if recoverability of cash is in doubt	As revenue is earned, deferred income reduces and revenue is shown in the income statement

Example

Question: Advanced Sales

A bookshop is about to start selling a newly published book by a popular author. Customer demand is high and the bookshop takes advance orders. The book selling price is \$20 and 300 customers to date have paid for the book in advance of its delivery.

What amount should the bookseller recognise as revenue?

Solution

The bookseller should recognise zero revenue until the control of the goods (the book) is transferred to the customer on delivery of the book.

The cash receipt of \$6,000 ($\$20 \times 300$) is recognised as deferred income, a liability on the statement of financial position.

Case Study

The following are extracts from the 2025 Annual Report and Accounts of Next plc relating to revenue recognition and deferred income.

Extracts from Next plc Annual Report & Accounts 2025

Revenue

Revenue represents the fair value of amounts receivable for goods and services and is stated net of discounts, value added taxes and returns. Revenue is recognised when control of the goods or services are transferred to the customer (ie, the customer accepts delivery of those goods).

It is the Group's policy to sell its products to the retail customer with a right to return within 28 days. The Group uses the expected value method to estimate the value of goods that will be returned because this method best predicts the amounts of variable consideration to which the Group will be entitled. A separate right of return asset is recognised on the face of the Balance Sheet which represents the right to recover product from the customer. The refund liability due to customers on return of their goods is recognised either as a component of trade payables and other liabilities (for cash payments) or as a deduction from customer receivables (for purchases using the 'nextpay' credit facility).

Where third-party goods are sold on a commission basis and Next is acting as the agent, only the commission receivable is included in statutory revenue.

Source: <https://www.nextplc.co.uk/~media/Files/N/next-plc-v4/about-next/annual-report-and-accounts-jan-2025.pdf> (2025: page 174)

2.5 Types of Income in the Income Statement

1.2.5 Understand the differences between income from ordinary activities and other items included in the income statement

So far in section 2, we have focused on revenue which appears in the first line of the income statement. As we will see later, revenue can be important in analysing a company's financial performance. Revenue is income arising in the course of an entity's ordinary activities; in other words, the entity's core business operations.

Other income could arise such as interest income from investments or financing arrangements. It could also arise from foreign currency movements in overseas operations. Similarly, there could be gains on the disposal of assets or other gains. These are not part of the core business operations and should not be reflected in the revenue line, but elsewhere in the income statement.

These other forms of income may also be considered as non-recurring items (see section 5).

3. Accounting for Expenses

3.1 The Matching Concept

1.3.1 Understand the matching concept

3.1.1 Accruals Concept

First, we will consider the accruals concept for expenses in the income statement. Expenses are recognised in the income statement in the period to which they relate rather than the period in which they are paid in cash.

Example 1

Company A has a 31 December 20X5 year end. A water bill for £12,000 is received on 31 January 20X6. The water charges relate to the 12 months ending 31 December 20X5.

Even though the bill is not received by the year-end date, the expense of £12,000 for the 12 months ending 31 December 20X5 must be included in the income statement for the year ended 31 December 20X5. Because no cash has been paid at 31 December 20X5, an accrual is shown in current liabilities in the statement of financial position at 31 December 20X5.

Example 2

Company D has a 31 March 20X6 year end. Electricity bills throughout the year are received as follows:

Date bill received	Period bill relates to	Amount (£)
30 April 20X5	January – March 20X5	14,200
31 July 20X5	April – June 20X5	15,600
31 October 20X5	July – September 20X5	16,320
31 January 20X6	October – December 20X5	18,400
30 April 20X6	January – March 20X6	16,340

How much should be shown for electricity expense in the income statement for the year ended 31 March 20X6?

The expense that relates to 1 April 20X5 – 31 March 20X6 is £66,570 ($15,600 + 16,230 + 18,400 + 16,340$). The final bill of £16,340 is not paid in cash by 31 March 20X6 therefore it will show as an accrued expense in current liabilities in the statement of financial position at 31 March 20X6.

The accrual of £14,200 in the previous year's financial statements would be reversed out on 1 April 20X5 so that only the expense for the current year shows in the income statement.

3.1.2 Matching Concept

Expenses are recognised in the income statement based on a direct association between the costs incurred and the earning of specific types of income. For example, the cost of sales category of expense reflects the cost of all expenses involved in selling goods or services.

If revenue includes the sale of 100 wooden tables, cost of sales will include wood, screws, other metal components, depreciation of machinery, factory workers' salaries, gas and electricity relating to the running of the factory associated with those 100 wooden tables sold.

3.2 Capital Versus Revenue Expenditure

1.3.2 Understand the general principles for recognising expenses and the distinction between capital and revenue expenditure

Expenses must be recognised in the income statement when a decrease in future economic benefits has arisen related to a decrease in an asset or an increase of a liability. For example, depreciation of equipment represents an expense in the income statement and a reduction in the **carrying amount** of **non-current assets** in the statement of financial position.

Some expenditure is capitalised which means it is shown as an asset on the statement of financial position rather than an expense in the income statement. This **capital expenditure** helps to create non-current assets that will bring benefits to the company for a period of longer than 12 months. Obvious examples include a factory building, or an item of a plant or machinery that a company has purchased.

Capital expenditure includes the purchase price or construction cost, and costs directly attributable to bringing an asset to the location and condition necessary for it to be operating as intended by the company.

Some capital expenditure is incurred after the initial purchase or construction of an asset. For example, expenditure that lengthens the expected life of an asset (a new roof) or increases the benefits derived from it (an extension to the factory built so more intense production can take place).

Care should be taken because repairs and maintenance costs should be shown in the income statement and are day-to-day servicing costs (**revenue expenditure**) rather than capital expenditure.

3.3 Non-Cash Expenses

1.3.3 Understand the nature of non-cash expenses such as depreciation and amortisation

1.3.4 Be able to calculate straight-line depreciation

Not all expenses are cash-based, as we saw in section 3.1.1 on the accruals concept. Significant non-cash expenses typically include depreciation and **amortisation**. Depreciation spreads the cost of a non-current asset over the periods that benefits are derived from it. For example, if a new machine is purchased for £20 million and it is expected to have a useful life of 20 years and be worth nothing at the end, straight-line depreciation of £1 million (£20 million / 20 years) per year will be shown as an expense in the income statement.

Amortisation is like depreciation for **intangible** assets, which are assets without physical substance (eg, patents and licences). Amortisation works in a similar way to depreciation (ie, if a licence is bought for £20 million and it has a useful life (legal term) of four years, the amortisation per year is £5 million (£20 million / 4 years)).

Example

On 1 April 20X3, Company A purchases a new machine for £50 million. Company A's year end date is 31 December. The machine is expected to have a useful life of 10 years and will not be worth anything at the end of the 10 years.

What is the depreciation expense in the income statement in the year that ends on 31 December 20X3 and 31 December 20X4 using a straight-line depreciation method.

31 December 20X3: £50 million / 10 years = £5m per year. 9 months = $9 / 12 \times £5m = £3.75m$

31 December 20X4: £5 million

3.4 One-Off Expenses

One-off expenses are often removed from trend analysis to enable the underlying patterns to be identified. This is discussed in more detail in section 5.3.

4. Accounting for Taxation

4.1 Accounting Profits Versus Taxable Profits

1.4.1 Understand the difference between accounting profits and taxable profits and the meaning of tax-deductible expenses

Accounting profits are generated using the accounting standards in place. In contrast, taxable profits are derived using the tax law of the relevant jurisdiction.

In the UK, the corporation tax computation starts with the profit before tax from the accounts and adjusts it for non-tax items. **Disallowed expenses** are added back and capital allowances are deducted.

Disallowed expenses are those expenses that are deducted to arrive at accounting profit but are not accepted by the tax authority, so they are added back to determine the taxable profit.

Disallowed expenses include depreciation because it is based on accounting estimates and judgements such as the useful life of the asset, any residual value it may have, and the method of depreciation (such as straight-line depreciation).

Other disallowable expenses in the UK include client entertaining, fines and penalties.

Capital allowances are the tax authority's version of depreciation which can be specified very precisely so that all companies are able to claim the same allowances in the same period for the same assets.

Governments also use capital allowances to encourage spending on particular types of assets eg, electric vehicles for business.

Tutorial note: Tax is applied to legal entities so tax is not levied on group profits (see chapter 4) but rather on separate legal entities.

4.2 Temporary and Permanent Differences Between Accounting Profits and Taxable Profits

1.4.2 Understand the meaning of temporary and permanent differences between accounting profits and taxable profits

4.2.1 Permanent Differences

Permanent differences are one of the following:

- Income which is never subject to corporation tax, eg, dividends from UK companies. As a result, a company may have reported income but no tax charge.
- Expenses which are never allowed for tax purposes (eg, entertaining and fines). Expenses are deducted from revenue to calculate accounting profit, however, HMRC does not allow the deduction of these particular expenses and hence, the taxable profits are higher.

As a result of these items, the corporation tax charge will seldom simply be the financial accounting profits multiplied by the prevailing tax rate.

4.2.2 Temporary Differences

Temporary differences are items where the:

- Accounting profit effect is in one period when the revenue or cost is recognised on the basis of accounting concepts.
- Tax effect is in another period based on tax legislation.

The result being that the items are taxed, but the tax charged does not match against the profits for the year to which they relate. Examples of such items include:

- Royalties payable and receivable (short-term timing differences).
- Capital allowance and depreciation.
- Revaluations of non-current assets.
- Losses.

Over a period of time, the total accounting profits and the total taxable profits will be the same in respect of temporary differences.

Example

This is an example of an adjustment to accounting profits calculation.

	P/T (Note)	£'000
Accounting profit before tax per the financial statements		2,400
Less: Income not subject to corporation tax		
Dividends received from UK companies	P	(500)
Add: Disallowed expenditure		
Entertaining	P	60
Fines	P	40
Depreciation	T	500
		2,500
Less: Capital allowances	T	(1,000)
Profits chargeable to corporation tax		1,500
Corporation tax at 20% (1,500 x 20%)		300

Note: Permanent (P) / Timing (T) difference.

As we can see from this example, the effective tax rate has turned out to be 12.5% (300/ 2,400).

4.3 Deferred Tax

1.4.3 Be able to calculate and account for current and deferred tax amounts

Deferred tax is an accounting adjustment used to match the tax effects of transactions with their accounting impact.

The accounting standard that details deferred tax attempts to match the income statement tax charge with the taxable profits, as far as possible. This is not fully possible because permanent differences between accounting profits and taxable profits will never resolve. However, temporary differences are by their nature temporary and deferred tax reflects some of this timing difference.

- **Deferred tax liabilities** are the amounts of income taxes payable in future periods in respect of taxable temporary differences.
- **Deferred tax assets** are the amounts of income taxes recoverable in future periods in respect of:
 - Deductible temporary differences.
 - The carry-forward of unused tax losses.
- **Temporary differences** are differences between the carrying amount of an asset or liability in the balance sheet and its tax base. Temporary differences may be either:
 - **Taxable temporary differences**, which are temporary differences that will result in taxable amounts in determining taxable profit (tax loss) of future periods when the carrying amount of the asset or liability is recovered or settled.
 - **Deductible temporary differences**, which are temporary differences that will result in amounts that are deductible in determining taxable profit (tax loss) of future periods when the carrying amount of the asset or liability is recovered or settled.

The tax base of an asset or liability is the amount attributed to that asset or liability for tax purposes.

Example

A company buys a machine for £160,000, which it expects to last for three years and then have a residual value of £70,000. Capital allowances are £40,000 in Year 1; £30,000 in Year 2; and £20,000 in Year 3. Depreciation is calculated on a straight-line basis.

What will be the reported profits and balance sheet position at the end of each of the three years both without and with deferred tax? Assume that profits before tax are £100,000 in each year. Assume the applicable corporate tax rate is 30%.

Solution

Without Deferred Tax

The corporation tax charge will be based on taxable profits (an adjustment to accounting profits) and will result in the following:

	Year 1 (£)	Year 2 (£)	Year 3 (£)	Total (£)
Profit before tax	100,000	100,000	100,000	300,000
Add: Depreciation (160,000 – 70,000) / 3 years	30,000	30,000	30,000	90,000
Less: Capital allowances	(40,000)	(30,000)	(20,000)	(90,000)
Profit chargeable to tax	90,000	100,000	110,000	300,000
Tax at 30%	27,000	30,000	33,000	90,000

	Year 1 (£)	Year 2 (£)	Year 3 (£)	Total (£)
Income statement				
Profit before tax	100,000	100,000	100,000	300,000
Corporation tax	(27,000)	(30,000)	(33,000)	(90,000)
Profit after tax	73,000	70,000	67,000	210,000
Balance sheet extract				
Corporation tax liability	27,000	30,000	33,000	

We can see that in total the tax charge of £90,000 represents 30% of the total profits of £300,000. Ideally, therefore, to apply the matching concept the tax charge for each year would be $\text{£}100,000 \times 30\% = \text{£}30,000$.

Tax Charge

	Year 1 (£)	Year 2 (£)	Year 3 (£)
Ideal wanted	30,000	30,000	30,000
Corporation tax charge	(27,000)	(30,000)	(33,000)
Difference	3,000	0	(3,000)

Hence, the tax charge is £3,000 too low in Year 1 but the tax charge is correspondingly £3,000 too high in Year 3.

With Deferred Tax

Year 1

We can use deferred tax to recognise an extra £3,000 in Year 1.

- Deferred tax charge up £3,000.
- Deferred tax liability up £3,000.

Resulting in a lower profit after tax and a deferred tax liability on the balance sheet.

Year 2

In Year 2, no change is made to the deferred tax provision as this year the actual tax charge is the same as the ideal charge wanted.

Year 3

In Year 3, we take a deferred tax credit, the effect on the accounts being:

- Deferred tax charge down £3,000.
- Deferred tax liability down £3,000.

Thus, cancelling the deferred tax liability established in Year 1 down to zero and giving the following income statement and balance sheet figures.

	Year 1 (£)	Year 2 (£)	Year 3 (£)	Total (£)
Income statement				
Profit before tax	100,000	100,000	100,000	300,000
Corporation tax	(27,000)	(30,000)	(33,000)	(90,000)
Deferred tax	(3,000)	–	3,000	–
Total tax charge	(30,000)	(30,000)	(30,000)	(90,000)

Profit after tax	70,000	70,000	70,000	210,000
Balance sheet extract				
Corporation tax liability	27,000	30,000	33,000	
Deferred tax liability	3,000	3,000	–	

We can see that now the total tax charge each year is the same at £30,000. Likewise, the corresponding profits after tax are identical each year at £70,000 as could reasonably be expected when the business has performed the same each year.

This example shows that the deferred tax charge or credit is based on any timing differences that arise. In Year 1 of this example, we have accounting profits of £100,000 and taxable profits of £90,000 – a £10,000 timing difference has arisen and hence a £3,000 ($£10,000 \times 30\%$) deferred tax charge results.

4.3.1 Examples of Deferred Tax Liabilities (Taxable Temporary Differences)

The following temporary differences give rise to deferred tax liabilities which increase the current year tax charge in the income statement and create a deferred tax liability in the statement of financial position:

- Interest revenue included in accounting profits based on the accruals concept but taxed on a cash basis.
- Depreciation of an asset is accelerated for tax purposes ie capital allowances are received more quickly than depreciation. The tax base of an asset is lower than its carrying amount in the accounts.
- Development costs which have been capitalised will be amortised in the income statement. Tax treatment is a 100% first year deduction so again the tax base is lower.
- Prepaid expenses are deducted on a cash basis in determining the taxable profit of a previous period.

4.3.2 Examples of Deferred Tax Assets (Deductible Temporary Differences)

The main temporary difference giving rise to a deferred tax asset is losses which are carried forward for tax purposes if there is a reasonable expectation that there will be sufficient profits to relieve against them in the future.

4.3.3 Current Tax

Corporation tax is estimated at the reporting date, recognised as a liability in the statement of financial position, and an expense is recognised in the income statement. The corporation tax computation is then reviewed by the tax authority, and tax is paid 9 months later if the entity is not a large company in the UK.

Corporation tax for large companies is paid over four instalments, two within the current accounting period and two after the end of the accounting period. Essentially, the company is pre-paying some of its corporation tax during the year in which it earns its taxable profits.

The tax charge in the income statement for a particular year will probably just be one figure, though this will be analysed in the notes. The headings that may be included in this note are:

	(£)
Corporation tax at X%	X
Less: Relief for overseas tax	(X)
	X
Overseas tax	X
Deferred tax	X
Adjustments related to prior years	X
Total income statement tax charge	X

The corporation tax charge is a percentage applied to the taxable profits.

5. Non-Recurring Items

5.1 Discontinued Operations

1.5.1 Know the criteria for a disposal to be classified as a discontinued operations

It is important to clearly present any discontinued operations in the income statement to enable investors and analysts to understand parts of the business that will not continue in the next accounting period. This could indicate that a profitable section of the company has been sold or alternatively that a loss-making division has been divested.

There are strict rules in IFRS 5 – Non-current Assets Held for Sale and Discontinued Operations – about when a segment may be classified as discontinued. This is to ensure that companies are presenting this information for divisions that have been sold, or are likely to be sold imminently, to avoid presenting accounts that might be misleading.

A discontinued operation must have either been sold or classified as held for sale on the statement of financial position, and:

- a. represent a separate major line of business or geographical area of operations
- b. be part of a single coordinated plan to dispose of a separate major line of business or geographical area of operations
- c. be a **subsidiary** acquired exclusively with a view to resale.

Assets are classified as held for sale in the statement of financial position if:

- The asset is available for immediate sale in its present condition.
- The sale is highly probable.
- Management are committed to a plan to sell the asset and an active plan to locate a buyer is underway.
- The asset is actively marketed for sale at a reasonable price.
- A sale is expected within the next 12 months from the date of classification.
- Actions required to complete the plan indicate that it is unlikely that plan will be significantly changed or withdrawn.

5.2 Presentation of Discontinued Operations

1.5.2 Understand the accounting treatment and presentation of discontinued operations

If the definition is met, as a minimum, a single amount must be shown on the face of the income statement as the post-tax profit or loss of discontinued operations, and an analysis of the discontinued operation's revenue and expenses must be shown either on the face of the income statement or in the notes.

Case study: Deliveroo

Consolidated income statement and statement of comprehensive profit

For the year ended 31 December 2024

	Note	2024 £m	2023 £m
Continuing operations			
Revenue	6	2,071.9	2,030.0
Cost of sales		(1,305.0)	(1,303.6)
Gross profit		766.9	726.4
Administrative expenses		(783.7)	(770.0)
Other operating income		10.6	5.9
Other operating expenses		(6.2)	(6.0)
Operating loss	7	(12.4)	(43.7)
Finance income	8	28.5	35.3
Finance costs	9	(3.9)	(2.5)
Profit/(loss) before tax		12.2	(10.9)
Income tax charge	10	(12.3)	(7.6)
Loss for the year from continuing operations		(0.1)	(18.5)
Discontinued operations			
Profit/(loss) for the year from discontinued operations	11	3.0	(13.3)
Profit/(loss) for the year attributable to owners of the Company		2.9	(31.8)

	Note	2024 £	2023 £
Profit/(loss) per share			
From continuing operations			
– Basic	13	(0.00)	(0.01)
– Diluted	13	(0.00)	(0.01)
From continuing and discontinued operations			
– Basic	13	0.00	(0.02)
– Diluted	13	0.00	(0.02)

	Note	2024 £m	2023 £m
Profit/(loss) for the year		2.9	(31.8)
Other comprehensive expense			
Items that may be reclassified subsequently to profit or loss:			
Currency translation		(1.5)	(6.8)
Total comprehensive income/(expense) for the year		1.4	(38.6)

Source: <https://corporate.deliveroo.co.uk/investors/results-reports-presentations/> (2024: page 171)

Deliveroo's 2024 income statement clearly shows the revenue and expenses from continuing operations and the loss for the year from discontinued operations.

5.3 Unusual or Infrequent Items

1.5.3 Know the accounting treatment and presentation of unusual or infrequent items

Unusual or infrequent items, such as the disposal of non-current assets, are accounted for in the same way as normal, with profits/gains and losses recognised in the income statement. Typically, they are not separately disclosed on the face of the income statement.

However, some companies choose to prepare a non-IFRS 'adjusted profit' figure to exclude items that they expect not to recur. Care should be taken when reviewing this 'adjusted profit' or 'adjusted earnings before interest and tax (EBIT)' figure because it does not follow accounting standards and therefore may not be comparable between companies and across different accounting periods.

Items that are material to users of the financial statements should be shown separately, either on the face of the income statement, or in the notes that follow. These are often referred to as exceptional items, and include the following:

- Write downs of inventory or non-current assets to a lower carrying amount because of obsolescence, damage and technological advancements.
- Costs of business restructurings.
- Disposal gains or losses from the sale of non-current assets.
- Disposals of investments.

6. Earnings Per Share (EPS)

6.1 Introduction to EPS

1.6.1 Know the requirements for presenting EPS as per IAS 33 and the importance of EPS to investors

Investors want a good return, either as income now or capital growth, or some combination of both, plus security of their investment. Investors' ratios are designed to consider these factors. One of the key investor ratios is earnings per share. Other investor ratios will be considered in chapter 5.

The calculation of earnings per share is specified in IAS 33 Earnings per Share (EPS). EPS is the one ratio for which there are some rules regarding its calculation because of its importance to investors and analysts.

EPS is calculated as:

$$\text{EPS} = \frac{\text{Net profit/loss attributable to ordinary shareholders}}{\text{Weighted average number of ordinary shares outstanding during the period}}$$

The accounting standard defines the numerator and denominator of the equation and explains how to deal with changes to the number of shares in issue during the period.

Because of its importance, IAS 33 requires companies to show both basic and diluted EPS on the face of the income statement. EPS should also be calculated for both continuing and discontinued operations.

IAS 33 recognises that companies may want to disclose additional measures of EPS and allows them to do so providing that these are:

- presented in the notes to the accounts, not on the face of the income statement, and
- reconciled to the basic and diluted figures per IAS 33.

This leaves preparers with scope to come up with different (and often higher) EPS measures, frequently described as 'underlying EPS' or something similar. However, by definition, these need not be calculated consistently between companies. This leaves individual users to determine and perhaps calculate their own measures of EPS that they feel best measures the performance of the company. Arguably, that is what analysts are paid to do. No single measure of EPS is likely to be the correct figure for all purposes and all users.

6.2 Basic and Diluted EPS

1.6.2 Understand the difference between basic and diluted EPS

Basic EPS is calculated using the equation shown earlier, taking the net profit or loss for the year from the income statement and dividing by the weighted average number of shares in issue, time apportioned for the period of time they were in issue during the period.

Diluted EPS presents a worst-case scenario of how far basic EPS could fall if all instruments that could be converted into ordinary shares that were outstanding at the reporting date had done so. This is potentially more useful for investors and analysts attempting to use EPS as a predictive tool for future earnings.

Instruments that could be converted into ordinary shares include **convertible preference shares** (convertible from **preference shares** into ordinary shares), **convertible bonds** (convertible from **bonds** into ordinary shares) and outstanding options or **warrants** (where the holders have the right to purchase ordinary shares at the exercise price of the option/warrant).

6.3 Basic EPS Calculations

1.6.3 Be able to calculate basic EPS including cases in which the company: repurchases shares; issues additional shares; makes a bonus issue; engages in a stock split (or consolidation)

6.3.1 Earnings

Earnings represent the profit available to pay out to the ordinary shareholders, ie, after all deductions except ordinary dividends.

Example

In the year ended 31 December 20X4, Company A has a profit before tax of £1.2 million and a tax charge in the income statement of £200,000. Ordinary dividends of £0.35 per share were paid to shareholders during the year. There are 250,000 ordinary £1 shares in issue.

What is the basic EPS for Company A for the year ended 31 December 20X4?

$$\begin{aligned}\text{EPS} &= \text{Net profit attributable to ordinary shareholders} / \text{Weighted average number of ordinary shares} \\ &= (£1.2\text{m} - £200,000) / 250,000 \text{ shares} \\ &= 40 \text{ pence per share}\end{aligned}$$

The basic EPS is 40 pence per share because ordinary dividends are not deducted from the net profit. Dividends are a distribution of the profit to shareholders but shareholders are entitled to the full net profit, and any retained earnings from previous years.

In contrast to ordinary dividends, preference dividends are deducted from profit before tax in arriving at earnings. This is because preference dividends are treated as a liability in the financial statements because there is an obligation to pay dividends. The preference dividend is therefore treated as an 'interest' payment in the financial statements.

6.3.2 Weighted Average Number of Shares: Introduction

The number of shares is the number of equity/ordinary shares in issue. So if there have been no changes in the number of shares during the year, no problems will arise. However, if there have been any issues of shares, some adjustment will be required.

The purpose of the adjustments will be to ensure:

- EPS for the current year is valid by comparing the full year's earnings to the representative number of shares in issue during the year, not simply the number of shares in issue at the year end, which may be distorted by a share issue near to the year end.
- The previous years' earnings per share figures have been calculated on a similar basis, and thus ensure that they are comparable to this year's earnings per share figure, ie, it may be necessary to restate previous years' EPS figures.

6.3.3 Weighted Average Number of Shares: Issue of Shares at Full Market Price

When shares are issued at full market value part way through the year, then the new finance raised at that point is available to generate new profits from that point in the year. Hence, the level of earnings and number of shares should both rise from the date the shares are issued.

To ensure we make a like-for-like comparison in the earnings per share calculation, we will need to compare the earnings for the year to a representative number of shares throughout the year, rather than simply the year-end number. This representative number is the weighted average number of shares in issue during the year.

For a full price issue, no adjustment to the prior year EPS figure is required since the shares were not in issue and will have had no impact on previous years.

Example

Earnings

Profit attributable to ordinary shareholders = £2,217

Number of Shares

The company has 14,925 ordinary shares in issue at the start of the year. If the company issued 3,000 shares on 31 August (year end 31 December), then the weighted average number of shares is:

Dates	Total Number	Time Apportion	Weighted Average
1 Jan – 31 Aug	14,925	x 8 / 12	9,950
31 Aug issue	3,000		
1 Sept–31 Dec	17,925	x 4 / 12	5,975
			15,925

$$\text{EPS} = £2,217 / 15,925 = 13.92 \text{ pence per share}$$

The comparative EPS would remain the same.

6.3.4 Shares Issued to Acquire a Subsidiary

When a company issue shares as part of the purchase consideration to acquire a new subsidiary, the treatment is exactly the same as a full price issue.

From the date of acquisition of the subsidiary, the group accounts will include the profits of the subsidiary, ie, from the date of acquisition, group earnings will rise by the earnings generated by the subsidiary. It is therefore appropriate to take the number of shares as having risen from that date; in other words, to take the weighted average number of shares in the basic EPS calculation.

6.3.5 Weighted Average Number of Shares: Bonus Issue of Shares and Stock Splits

When a company makes a **bonus issue** or undertakes a stock split, there is no alteration to the operating assets of the business; all that is happening is a restructuring of shareholders' funds.

A bonus issue gives new shares to shareholders for free, in proportion to their existing shareholding, and therefore does not raise any new cash and will not generate any new earnings. The bonus issue has the effect of increasing **share capital** and reducing reserves, ie, restructuring shareholders' funds, but causes no change in the total shareholders' funds or total net assets. From an operational viewpoint, these bonus shares may as well have been issued at the same time as the underlying shares on which they are now being 'paid'.

Similarly, a stock split simply restructures shareholders' funds. For example, after a 2-for-1 split, a shareholder will own twice as many shares as before the split and, logically, the shares should be worth half as much.

Since there is no new finance raised through a bonus issue or stock split, only the number of shares used in the EPS calculation needs to be adjusted. The bonus or split is effectively backdated to pretend that those shares had always been in issue. The adjustment that will be required to the number of shares previously in issue uses the bonus fraction, which is:

$$\text{Bonus fraction} = \text{Number of shares after the issue} / \text{Number of shares before the issue}$$

Example

Earnings

Profit attributable to ordinary shareholders = £2,217

The prior year EPS figure was 12.43p.

Number of Shares

On 1 January, the company had 14,340 shares in issue. It made a 1 for 4 bonus issue on 31 August (year end 31 December), the bonus fraction being:

$$\text{Bonus fraction} = 5 / 4$$

Since one new share is issued for every four currently in issue. The calculation of the weighted average is as follows:

Dates	Total Number	Bonus Fraction	Time Apportion	Weighted Average
1 Jan–31 Aug	14,340	$\times 5 / 4$	$\times 8 / 12$	11,950
31 Aug issue	3,585			
1 Sept–31 Dec	17,925		$\times 4 / 12$	5,975
				17,925

You will notice that the number of shares that we arrive at is, in fact, the year-end number and this calculation proves to be unnecessary. It has been included here to illustrate an idea we will come back to when we consider a **rights issue**.

A quicker method of doing the calculations in the circumstance of a bonus issue is to simply take the year-end number of shares.

$$\text{EPS} = \text{£}2,217 / 17,925$$

$$\text{EPS} = 12.37\text{p}$$

In addition, we would need to update last year's original EPS of 12.43p in the example to make it appear to have been based on 17,925 shares rather than the 14,340 actually in issue (ie, we need to scale the EPS down – spread the same earnings over more shares).

We can do this by multiplying last year's EPS by the inverse of the bonus fraction ie, $1/\text{bonus fraction}$. This is sometimes referred to as the adjustment factor, giving a comparative EPS of:

$$\text{EPS (comparative)} = 12.43 \times (4 / 5) = 9.94\text{p}$$

6.4 Diluted EPS Calculations

1.6.4 Be able to calculate diluted EPS if a company has any of the following: convertible preference shares; convertible bonds; outstanding options or warrants

The purpose of publishing the diluted earnings per share figure is to warn shareholders of potential future changes in the earnings per share figure as a result of events that have already happened. There are two possible factors that could cause a diluted earnings per share to arise.

- Convertible loan stock or convertible preference shares in issue.
- Options or warrants in issue.

Each of these circumstances may potentially result in more shares being issued and ranking for a dividend in future years, hence leading to a dilution of the current earnings per share.

The diluted EPS figure, although a theoretical calculation based on assumptions about the future, is considered of such importance to the reader of the accounts that its calculation and disclosure is required by IAS 33 – Earnings Per Share. It must be disclosed on the face of the income statement in the same way as basic EPS and with equal prominence.

To calculate diluted earnings per share, simply take the basic earnings and the basic number of shares and make suitable adjustments to account for the changes that will occur if and when the new shares are issued.

6.4.1 Diluted EPS: Convertible Preference Shares and Convertible Bonds

When there are convertibles in issue (either loan stock or preference shares) the holder of this stock has, at their option, the opportunity to convert into ordinary shares, hence the number of ordinary shares will be increased if the conversion option is taken up.

Often the number of shares into which convertibles may convert will change with time. Generally speaking, the number of shares that a bond holder can convert into will reduce the longer the bond is held, as it is anticipated that the share price will rise over that time.

To warn current shareholders of the maximum possible diluting effect of any conversion of any loan stock or convertible preference shares in existence at the year end, the number of ordinary shares to be issued will be calculated based on the maximum possible number they could convert into in the future.

Conversion will also affect the earnings figure. With any convertible loan stock, the company will currently be paying interest and with any convertible preference shares, the company will currently be paying a preference dividend. If we bear in mind that the earnings figure is profit after tax, after non-controlling interest, and after preference dividends, then we can see that the adjustments required will be as detailed below.

6.4.2 Adjustment to Earnings

For loan stock, add to earnings the after tax interest charge that will no longer be suffered once conversion takes place. Currently, the profit before tax is reduced by the interest payment and the tax charge is also reduced as the interest charge attracts tax relief. This net reduction in profit will no longer occur, hence the net figure is added back.

For preference shares, when the preference shares convert the company will no longer pay the preference dividend, hence the preference dividend currently payable is added back to the basic earnings. There is no tax impact for the preference share dividend because it is not tax deductible.

6.4.3 Adjustment to Number of Shares

Add to the basic number of shares the greatest number of equity shares that may be issued in the future upon conversion of the loan stock or convertible preference shares in issue at the year end.

Example

Continuing from the previous example, the debt financing of the company at the year end of 31 December includes £500,000 10% convertible loan stock, which was issued on 30 June this year. The terms of conversion for every £100 nominal value of loan stock are:

31 December this year: 120 ordinary shares.

31 December next year: 115 ordinary shares.

31 December in 2 years: 110 ordinary shares.

Assume corporation tax at the rate of 30%.

Earnings

	£'000	£'000
Basic earnings		2,217
Dilution		
Interest saved ($£500,000 \times 10\% \times 6/12$)	25	
Tax ($£25,000 \times 30\%$)	(8)	
		17
Diluted earnings		2,234

Number of Shares

Since the £500,000 of convertible loan stock is in issue at this year end, we know that the loan stockholders have not taken the option of converting to 120 shares. The highest remaining option is for them to convert to 115 shares, resulting in a further 575,000 shares being issues, hence:

	Number of shares (000)
Basic number	17,925
Dilution	575
Diluted number	18,500

$$\text{Basic EPS} = £2,217 / 17,925 = 12.37\text{p}$$

$$\text{Diluted EPS} = £2,234 / 18,500 = 12.08\text{p}$$

The dilution impact on profit occurs for half a year, since the convertibles were only issued six months into the year. In subsequent years, the dilution calculation would assume dilution for the whole year.

6.4.4 Diluted EPS: Options and Warrants

When a company has options or warrants in issue, it specifies a number of shares that a person can take up and the price at which they can exercise the option. The calculation of diluted earnings per share will assume exercise of the warrants or options. The assumed proceeds on exercise should be treated as having been received from the issue of shares at **fair value**. The difference between the number of shares issued and the number of shares that would have been issued at fair value is treated as an issue of shares for no consideration.

Fair value of the shares should be based on the average price of the shares over the year.

Since any shares issued at fair value would also cause an increase in earnings, they are excluded from the diluted calculation on the basis that any increase in earnings would counterbalance the increase in shares, causing no change to earnings per share.

The shares issued for free will be added to the weighted average of shares from the basic calculation.

Adjustment to Earnings

There will be no change to earnings in the diluted calculation.

Adjustment to the Number of Shares

Add to the basic number of shares the number of shares that would be issued on exercise of the warrants or options less the number of shares that would be issued at fair value, given the proceeds on exercise.

Exercise 2

Assume that the company has options in issue to subscribe for one million new shares at £1.20 per share. The average share price over the year has been £2.00.

Earnings

Earnings are left unchanged at £2,217,000.

Number of Shares

On the assumed exercise of the options, the company would receive £1.2m in cash. Using the average share price over the year, this would imply the issue of 600,000 shares at fair value. This indicates that, when the shares are being issued, 600,000 are being issued at a fair price and 400,000 are being issued for free.

	Number
Basic number	17,925
New shares issued	1,000
Shares that would have been issued at fair value	(600)
Diluted number	18,325

$$\text{Basic EPS} = £2,217 / 17,925 = 12.37\text{p}$$

$$\text{Diluted EPS} = £2,217 / 18,325 = 12.10\text{p}$$

End of Chapter Questions

Think of an answer for each question and refer to the appropriate section for confirmation.

1. On 1 March 20X4, Company A sells a new kitchen to a customer for £6,500 with 5 years interest-free credit. The market rate of interest is 6% per annum. How much revenue should Company A recognise in its income statement for the 12 months ended 31 December 20X4?

Answer reference: Section 2.1.4

2. Company B constructs sport centres. It has a contract with a town council to construct a sport centre with a total contract value of £15 million. Construction starts on 1 June 20X5 and is expected to finish on 31 December 20X6. By Company B's year-end date of 31 December 20X5, the certified value of the work completed to date, provided by a surveyor, is £4.8 million.

Total costs of constructing the sport centre are expected to be £9.5 million in total. By 31 December 20X5, £2.85 million of costs have been incurred.

Using the input method, how much revenue may Company B recognise in its income statement in the year ended 31 December 20X4?

Answer reference: Section 2.2

3. Company C is a fashion retailer with physical boutique shops. On 1 May, Company C enters into a contract with a fashion designer to stock their clothing. The terms of the contract are that Company C pays the designer £20 per item as a deposit and pays the remainder of the price when the clothes are sold to customers. The fashion designer can ask for the clothes to be returned at any point and any clothes unsold after 12 months will be sent back to the fashion designer and the deposit returned. Company C initially purchased 100 items of clothing with a wholesale cost of £70 per item. Only 25% of the items were sold in the first 8 months.

How much revenue should the fashion designer recognise in its year ending 31 December?

Answer reference: Section 2.3

4. Using the scenario in question 3, how should the designer account for the deposit received in its year ending 31 December?

Answer reference: Section 2.4

5. On 1 July 20X5, Company D purchases a new computer system. The purchase price is £2.3 million, its expected life is 20 years and the residual value after 20 years is expected to be £1.1 million.

Using the straight-line method, how much depreciation should Company D recognise as an expense in its income statement for the year ended 31 December 20X5?

Answer reference: Section 3

6. Company E owns an office building. In the year ending 31 December 20X6, an air conditioning unit is installed at a cost of £100,000, the windows are replaced at a cost of £80,000, and the internal walls are painted in a productive blue for £15,000.

How much of the costs incurred must be recognised as revenue expenditure in the income statement for the year ended 31 December 20X6?

Answer reference: Section 3

7. Company F purchases new industrial machinery for £3 million. Depreciation is calculated over 15 years as £200,000 per year. Capital allowances on this asset are given by the tax authority at 18% reducing balance.

Calculate the deferred tax arising on the machinery and whether it creates a deferred tax asset or liability in the accounts of Company F.

The tax rate is 25%.

Answer reference: Section 4

8. Company G has owned a subsidiary for a number of years. The subsidiary has become loss-making and Company G intends to sell it to focus on its core operations. Some restructuring needs to take place to relocate staff and to sell some assets within the subsidiary before it is marketed for sale.

Should Company G present the subsidiary as a discontinued operation?

Answer reference: Section 5.1

9. Company H has earnings for the year ended 31 December 20X4 of £370,000. On 1 January 20X4, it had 120,000 ordinary shares in issue and on 1 November 20X4 it made a 1-for-3 bonus issue.

The EPS in the prior year's financial statements for the year ended 31 December 20X3 was £2.92 per share.

What is the basic EPS in the year ended 31 December 20X4 and its restated comparative for the prior year?

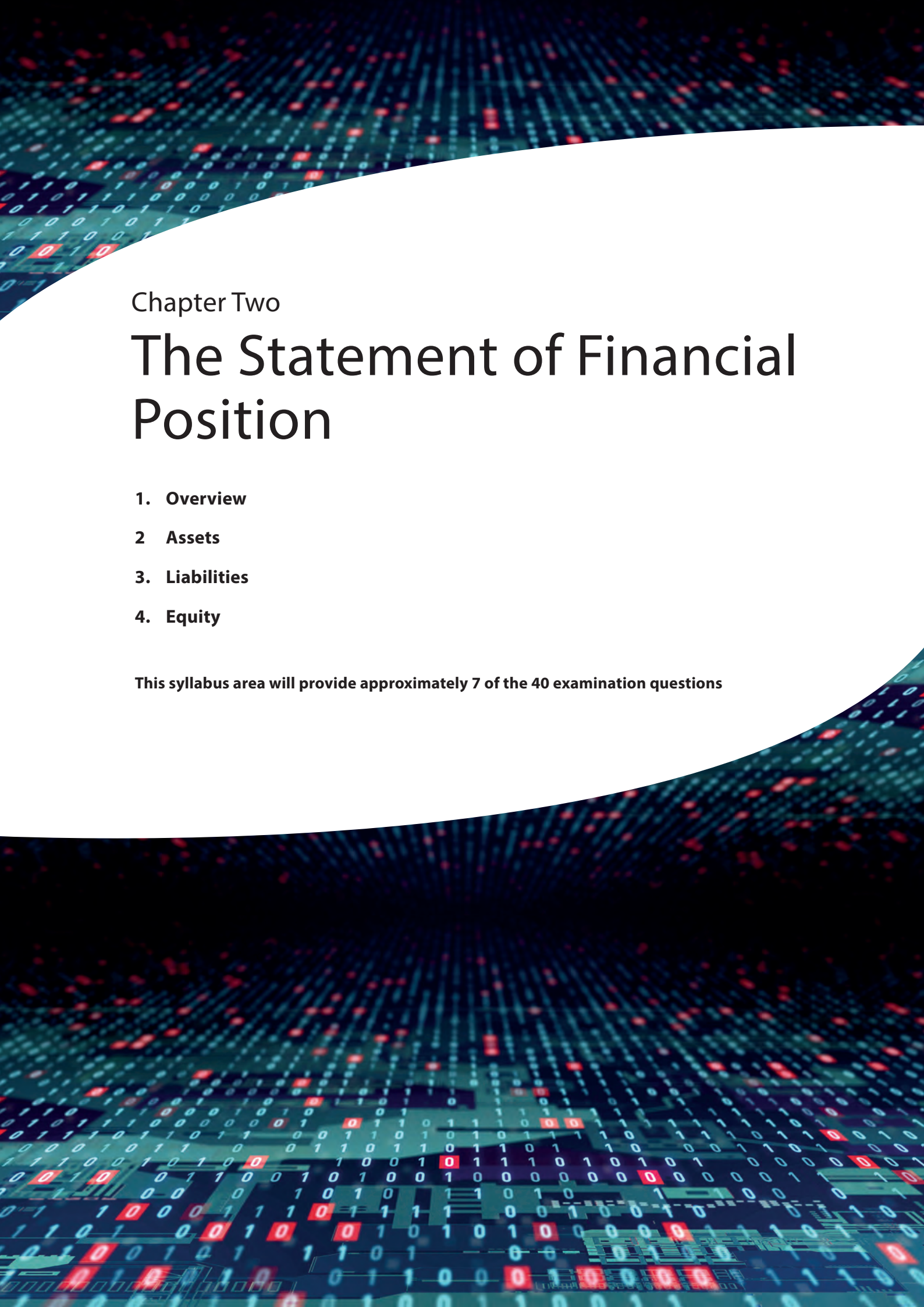
Answer reference: Section 6

10. Company J has earnings of £1.45 million and 2 million ordinary shares in issue. It also has £500,000, 12% convertible bonds in issue. On conversion, the bonds convert into 80 ordinary shares per £100 of loan stock.

What is the diluted EPS for the year?

The tax rate is 25%.

Answer reference: Section 6

The background of the slide is an abstract digital pattern. It features a dark blue and black background with numerous glowing green and red lines that create a sense of depth and movement, resembling a data stream or a network. Binary code (0s and 1s) is scattered throughout the pattern, with some digits highlighted in red and others in green. The overall effect is a high-tech, futuristic aesthetic.

Chapter Two

The Statement of Financial Position

1. Overview
- 2 Assets
3. Liabilities
4. Equity

This syllabus area will provide approximately 7 of the 40 examination questions



1. Overview

2.1.1 Understand the purpose, format and main contents of the statement of financial position

1.1 Purpose of the Statement of Financial Position

Like the income statement, the statement of financial position – or balance sheet – is prepared in accordance with IFRS Accounting Standards or the applicable local accounting framework.

The purpose of the statement of financial position is to show the financial position of a company at a point in time. It is an essential part of a complete set of financial statements that comprises:

- Statement of financial position at the end of the period.
- Income statement for the period (and statement of comprehensive income).
- Statement of changes in equity.
- Statement of **cash flows**.
- Notes to the financial statements.

The financial statements as a whole provide information about the company to a range of users to help them make decisions. The decisions could be whether to invest, lend, trade with, work for or otherwise deal with the company.

1.1.1 Format of the Statement of Financial Position

The statement of financial position presents the assets the company owns, the liabilities it owes to others and the equity which represents the residual interest in the company (assets minus all liabilities). Usually, the presentation is to show assets first, then how these assets are funded which is through liabilities and equity funding. The formal definition of assets, liabilities and equity are as follows:

- **Asset** – a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity.
- **Liability** – a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits.
- **Equity** – the residual interest in the assets of the entity after deducting all of its liabilities.

Source: <https://www.ifrs.org/issued-standards/list-of-standards/conceptual-framework/>

Example – Statement of Financial Position

	20X4	20X3
ASSETS		
Non-current assets		
Property, plant and equipment	350,700	360,020
Intangible assets	228,170	248,170
Investment property	80,100	70,500
Investments	242,650	266,770
Total non-current assets	901,620	945,460
Current assets		
Inventories	135,230	132,500
Trade receivables	117,250	123,340
Cash and cash equivalents	312,400	322,900
Total current assets	564,880	578,740
Total assets	1,466,500	1,524,200

EQUITY AND LIABILITIES		
Equity		
Share capital	650,000	600,000
Retained earnings	323,750	231,500
Total equity	973,750	831,500
Non-current liabilities		
Long-term borrowings	120,000	160,000
Deferred tax	28,800	26,040
Long-term provisions	28,850	52,240
Total non-current liabilities	177,650	238,280
Current liabilities		
Trade and other payables	120,100	192,420
Short-term borrowings	160,000	220,000
Current tax payable	35,000	42,000
Total current liabilities	315,100	454,420
Total liabilities	492,750	692,700
Total equity and liabilities	1,466,500	1,524,200

In the example above, there are a number of points to note:

- All physical assets such as land, buildings, machinery, and cars are included under the heading **property, plant and equipment (PPE)**. There is a note in the financial statements to describe this further which we will look at.
- Intangible assets are a type of non-current asset that have no physical substance. Intangibles include licences, **goodwill** and patents. There is a note in the financial statements to describe this further which we will look at.
- Investment property is property held for rental income or capital appreciation rather than being used in the course of the business.
- Investments include investments in shares, debt instruments or **derivatives**.
- Trade receivables are net of any allowance for irrecoverable debts.
- Long-term liabilities that are not repayable until after 12 months are shown under **non-current liabilities**.
- Short-term borrowings include bank overdrafts that are repayable on demand.

Example: Next's Statement of Financial Position

CONSOLIDATED BALANCE SHEET			
	Notes	25 January 2025 £m	27 January 2024 £m
ASSETS AND LIABILITIES			
Non-current assets			
Property, plant and equipment	10	686.4	687.5
Intangible assets	11	735.4	757.2
Right-of-use assets	12	737.3	734.6
Associates, joint ventures and other investments	13	32.7	38.0
Defined benefit pension asset	21	30.8	59.3
		2,222.6	2,276.6
Current assets			
Inventories		865.2	769.0
Customer and other receivables	14	1,508.4	1,452.8
Right of return asset		34.8	30.7
Other financial assets	15	31.8	6.9
Current tax assets		9.3	-
Cash and short term deposits	16	200.4	188.3
		2,649.9	2,447.7
Total assets		4,872.5	4,724.3
Current liabilities			
Bank loans and overdrafts	17	(60.6)	(58.7)
Corporate bonds	20	(250.0)	-
Trade payables and other liabilities	18	(1,076.7)	(991.8)
Lease liabilities	12	(170.8)	(167.8)
Other financial liabilities	19	(8.3)	(18.8)
Current tax liabilities		-	(8.6)
		(1,566.4)	(1,245.7)
Non-current liabilities			
Bank loans and overdrafts	17	-	(29.5)
Corporate bonds	20	(543.8)	(790.8)
Provisions	22	(55.7)	(52.4)
Lease liabilities	12	(843.6)	(869.9)
Other financial liabilities	19	(39.1)	(37.4)
Other liabilities	18	(11.5)	(11.7)
Deferred tax liabilities	7	(58.1)	(48.1)
		(1,551.8)	(1,839.8)
Total liabilities		(3,118.2)	(3,085.5)
NET ASSETS		1,754.3	1,638.8
TOTAL EQUITY		1,754.3	1,638.8

Source: https://www.nextplc.co.uk/~/_media/Files/N/next-plc-v4/about-next/annual-report-and-accounts-jan-2025.pdf (2025: page 172)

We can see that Next, a fashion, homeware and beauty business, has a variety of assets and liabilities that make up its statement of financial position or balance sheet. Many of these assets and liabilities will be looked at in this chapter.

1.1.2 Main Contents of the Statement of Financial Position

The accounting standards require certain items to be included in the statement of financial position, most of which can be seen above. We will look at some of these items in turn.

1.1.3 Recognition Criteria

Recognition is the process of incorporating in the balance sheet an item that meets the definition of an asset, liability or equity and satisfies the criteria for recognition set out below.

The key question is deciding when something which satisfies the definition of an asset or liability has to be recognised in the balance sheet. Where a transaction results in an item that meets the definition of an asset or liability, that item should be recognised in the balance sheet if:

- it is probable that any future economic benefit associated with the item will flow to or from the entity, and
- the item has cost or value that can be measured with reliability.

This effectively prevents entities from recognising items that are vague in terms of likelihood of occurrence and reliability of measurement. If this were not in force, entities could manipulate the financial statements in various ways (eg, recognising assets when the likely future economic benefits cannot yet be determined).

Probability is assessed based on the situation at the reporting date. For example, it is usually expected that some customers of an entity will not pay what they owe. The expected level of non-payment is based on past experience and the receivables asset is reduced by a percentage (the bad debt provision).

Measurement must be reliable, but it does not preclude the use of reasonable estimates, which is an essential part of the preparation of financial statements.

It is also important to appreciate that even if something does not qualify for recognition now, it may meet the criteria at a later date.

2. Assets

2.1 Current Versus Non-Current Assets

2.2.1 Understand the distinction between current and non-current assets

Assets are classified as either current or non-current. A **current asset** is expected to be used within 12 months of the reporting date. A non-current asset is expected to be used for more than 12 months after the reporting period.

This distinction demonstrates that items that are continuously circulating in the operating cycle of a business, such as inventories and receivables, are typically current assets. Non-current assets include property, plant and machinery that are utilised over a number of years in the company's operations.

2.2 Current Assets

2.2.2 Know the different types of current assets and how they rank in terms of liquidity of asset type

Current assets are traditionally shown in order of increasing liquidity, although this is not a requirement and alternative presentations are common. Inventories may be first as they are the least liquid and most difficult to turn into cash. This is followed by trade receivables then cash and **cash equivalents**. This information can be relevant to the users of financial statements.

Current assets are expected to be utilised in the normal operating cycle of the business, or are held for trading, and are expected to be utilised within 12 months of the reporting date.

2.3 Non-Current Assets

2.2.3 Know the different types of non-current assets and the measurement bases for initial recognition and subsequent valuation of the following non-current assets: property, plant and equipment (PP&E); investment property; financial assets; intangible assets; deferred tax assets

Non-current assets include physical assets, intangible assets and investments of a long-term nature. The benefits are expected to flow over a period of more than 12 months from the reporting date.

2.3.1 Property, Plant and Equipment (PPE)

Property, plant and equipment (PPE) are tangible items that:

- are held for use in the production or supply of goods and services, for rental to others, or for administrative purposes, and
- are expected to be used for more than one period.

PPE includes categories such as property (land and buildings), plant and equipment, and assets under the course of construction.

Initial Measurement

Initially, PPE is recognised at cost which comprises the purchase price plus any costs that are directly attributable to bringing the asset to the location and condition necessary for it to operate. Directly attributable costs include site preparation, initial delivery and handling, installation and assembly, costs of testing (less the net proceeds of selling any items produced during testing) and professional fees.

Example

Company A makes biscuits in its own factory. It purchases a new item of machinery for its production line to be able to make cakes too. The new item of machinery cost is £2.3 million, delivery cost is £12,000, and the supervisor's salary for the cake production line is £30,000 per year. Testing of the new production line was required before normal production began and cost £10,000 to run. Inventory for testing cost £3,000 and the products made during testing were sold to staff for a total of £4,460.

What is the initial value of the machinery in Company A's balance sheet?

The initial cost is the purchase price plus all directly attributable costs:

	£
Purchase price	2,300,000
Delivery	12,000
Cost of testing (10,000 + 3,000 – 4,460)	8,540
Initial cost of machinery	2,320,540

Subsequent Measurement

After initial recognition, PPE must be depreciated to reflect its use in the business over a period of time. The only item of PPE that may not be depreciated is land because it is deemed to have an indefinite useful life. It is typically calculated as follows:

$$\text{Depreciation} = \text{Cost minus residual value at the end of the PPE's useful life} / \text{Useful life}$$

Example

The machinery in the previous example has a useful life of ten years. It is expected that the machinery can be sold for £30,500 at the end of its useful life for Company A.

Calculate the annual depreciation charge for the machinery.

$$\begin{aligned}\text{Depreciation} &= (2,320,540 - 30,500) / 10 \text{ years} \\ &= £229,004 \text{ per year}\end{aligned}$$

Companies also have a choice of how to value PPE subsequently. They can choose to apply either the cost or revaluation model. If the revaluation model is chosen, it must be applied consistently to all assets in the same class, eg, all cars or all buildings.

Under the revaluation model, the carrying amount of the asset (cost minus accumulated depreciation for all years it has been held) is compared to the market value. The excess is shown in equity in a revaluation reserve and the carrying amount of PPE is increased to reflect market value. This results in higher depreciation charges in the income statement.

Choosing to revalue PPE can have a large impact on financial analysis because it increases the net assets of the company although nothing has changed in the business. It can make comparability between companies more difficult.

Example

Company B owns a building in New York with a carrying amount of \$25.3 million. It decides to follow a policy of revaluing all buildings. The New York building has a market value of \$37.1 million, a residual value of \$15 million, and a remaining useful life of 18 years.

How should the revaluation be reflected in Company B's statement of financial position and what is the new annual depreciation charge?

The revaluation surplus is \$11.8 million (37.1 – 25.3). This will be shown in the revaluation reserve in equity and the carrying amount of the building will be increased to \$37.1 million.

$$\begin{aligned}\text{New depreciation} &= (37.1 - 15) / 18 \text{ years} \\ &= \$1.23 \text{ million per year}\end{aligned}$$

Note: All buildings must be revalued by Company B; it cannot be selective about which buildings are chosen based on market values.

Example: Next PPE note

10. Property, Plant and Equipment

	Freehold property £m	Leasehold property £m	Plant and equipment £m	Assets under the course of construction £m	Total £m
Cost					
At January 2023	39.8	1.3	2,085.7	14.5	2,141.3
Exchange movement	-	-	(0.9)	-	(0.9)
Arising from acquisitions	-	-	18.6	-	18.6
Additions	13.8	-	124.2	22.9	160.9
Reclassification from assets under the course of construction	37.1	-	-	(37.1)	-
Disposals	(37.3)	-	(51.4)	-	(88.7)
At January 2024	53.4	1.3	2,176.2	0.3	2,231.2
Exchange movement	-	-	0.4	-	0.4
Additions	-	-	122.8	0.1	122.9
Transfer to intangible assets	-	-	(4.3)	-	(4.3)
Disposals	(0.1)	(1.3)	(26.9)	-	(28.3)
At January 2025	53.3	-	2,268.2	0.4	2,321.9
Depreciation					
At January 2023	0.5	0.1	1,495.9	-	1,496.5
Exchange movement	-	-	(0.8)	-	(0.8)
Provided during the year	0.1	-	94.8	-	94.9
Net impairment charge	1.1	-	0.6	-	1.7
Disposals	-	-	(48.6)	-	(48.6)
At January 2024	1.7	0.1	1,541.9	-	1,543.7
Exchange movement	-	-	0.6	-	0.6
Provided during the year	0.2	-	114.3	-	114.5
Net impairment charge	-	-	3.4	-	3.4
Transfer to intangible assets	-	-	(1.0)	-	(1.0)
Disposals	-	(0.1)	(25.6)	-	(25.7)
At January 2025	1.9	-	1,633.6	-	1,635.5
Carrying amount					
At January 2025	51.4	-	634.6	0.4	686.4
At January 2024	51.7	1.2	634.3	0.3	687.5
At January 2023	39.3	1.2	589.8	14.5	644.8

Source: https://www.nextplc.co.uk/~/_media/Files/N/next-plc-v4/about-next/annual-report-and-accounts-jan-2025.pdf (2025: page 204)

The PPE note from Next plc shows the classes of assets: freehold property, leasehold property, plant and equipment and assets being constructed. It shows the cost, including additions and disposals. It also shows the accumulated depreciation which has built up since the PPE was purchased and the carrying amount which is cost minus accumulated depreciation.

2.3.2 Impairment

Impairments can occur to any non-current asset when the fair value falls below the carrying amount in the financial statements. A company must assess at each year-end if there have been any indicators of impairment. An indicator can be internal or external.

Internal indicators:

- Obsolescence or physical damage.
- Changes to the way the asset is used, eg, restructured operations so the asset is no longer essential.
- The economic performance of the asset is worse than expected.

External indicators:

- A decline in the asset's value.
- Changes to the company's technological, market, economic or legal environment.
- Increased market interest rates meaning the **recoverable amount** of the asset may be lower.

Definitions:

- **Carrying amount** – the amount at which an asset is recognised after deducting accumulated depreciation and accumulated **impairment losses**.
- **Fair value** – the price that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants at the measurement date.
- **Costs to sell** – the incremental costs directly attributable to the disposal of an asset, excluding finance costs and income tax expense.
- **Recoverable amount** – the higher of an asset's fair value (less **costs to sell**), and its **value in use**.
- **Value in use** – the present value of future **cash flows** expected to arise from an asset.
- **Impairment loss** – the amount by which the carrying amount of an asset exceeds its recoverable amount.

Treatment of an Impairment Loss

An impairment loss exists if the recoverable amount of an asset is lower than its carrying amount. The amount of the loss is the difference between the two.

The recoverable amount is the higher of what the asset could be sold for (its fair value less costs to sell) or what it is worth in its continuing use in the business (value in use).

An impairment loss is required to be recognised immediately in the income statement.

Example

Company M owns a delivery van that it uses in its business. The carrying amount of the van is £23,000 at 31 December 20X5. There have been environmental standards introduced in the city that Company M operates in and it is no longer viable to use this van for deliveries.

The van can be sold to a third party for £7,800 but must have the company name painted over first at a cost of £400. Alternatively, the van can be used for picking up goods from suppliers in a different geographical area which generates a value in use of £11,200.

Calculate any impairment on the delivery van asset.

The change in environmental standards is an indicator of impairment.

The recoverable amount is the higher of the fair value less costs to sell of £7,400 ($7,800 - 400$) or value in use of £11,200. The value in use is higher so £11,200 is the recoverable amount.

The recoverable amount of £11,200 is lower than the carrying amount of £23,000 so an impairment loss must be recognised.

Impairment loss = $£23,000 - £11,200 = £11,800$.

2.3.3 Assets Held for Sale

IFRS 5 requires that assets 'held for sale' are presented separately on the face of the balance sheet, and the results of discontinued operations are presented separately in the income statement (as seen in chapter 1). The idea here is to enable users of financial statements to be better able to make projections about the financial position, profits and cash flows.

Classification of Assets Held for Sale

A non-current asset (or disposal group) should be classified as held for sale if its carrying amount will be recovered principally through a sale transaction rather than through continuing use. A number of detailed criteria must be met:

- The asset must be available for immediate sale in its present condition.
- Its sale must be highly probable (ie, significantly more likely than not).

For the sale to be highly probable, the following must apply:

- Management must be committed to a plan to sell the asset.
- There must be an active programme to locate a buyer.
- The asset must be marketed for sale at a price that is reasonable in relation to its current fair value.
- The sale should be expected to take place within one year from the date of classification.
- It is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

A non-current asset (or disposal group) that is held for sale should be measured at the lower of its carrying amount and fair value less costs to sell. Fair value less costs to sell is equivalent to net realisable value. If fair value less costs to sell is lower than the carrying value, an impairment loss is recognised in the income statement. This means that any losses expected on the sale of the non-current asset are recognised immediately, and any gains are not recognised until they are realised.

Example

Using the example of the delivery van that Company M owns in the previous example, suppose that Company M decides that the delivery van will be sold. It is advertised for sale at a reasonable price of £7,800, a sale is expected within 12 months and the sale is highly probable. Costs of £400 will be incurred to sell the van.

The valuation of the van as an asset held for sale is the lower of the carrying amount of £23,000 or the fair value less costs to sell of £7,400 ($7,800 - 400$). The fair value less costs to sell is lower, so use £7,400.

An impairment loss must be recognised of £15,600 ($23,000 - 7,400$). The impairment loss is recognised immediately in the income statement.

The carrying amount of the asset held for sale is £7,400.

2.3.4 Investment Property

Investment property is a specific type of PPE that has different accounting treatment. Investment property is property (land or building or part of a building) held to earn rentals or for capital appreciation or both.

If a property is owner-occupied, or is held for being owner-occupied in the future, it is not an investment property.

Initial Measurement

An investment property is initially recognised at cost, in the same way as PPE. This is likely to include the purchase price, legal fees and property transfer taxes.

Subsequent Measurement

Subsequently, companies have a choice about how to measure investment property; it can use the fair value model or the cost model. The policy must be applied to all investment property the company owns. The cost model is the same as the normal way of accounting for PPE. In other words, the carrying amount is the cost less accumulated depreciation.

Alternatively, the fair value model can be applied whereby all investment property is measured at fair value, which is usually market value. Any change in the fair value of an investment property is a gain or loss recognised in the income statement.

Example

On 1 January 20X4, Company C purchases an investment property for £2 million. It incurs legal fees of £15,000. Company C chooses to apply the fair value model for measuring its investment properties. The market value of the property on 31 December 20X4 is £2.1 million.

What is the amount of investment property shown in the statement of financial position at 31 December 20X4 and what gain or loss is recognised in the income statement for the 12 months ended 31 December 20X4?

The carrying amount of the Investment Property in the statement of financial position at 31 December 20X4 is its fair value of £2.1 million.

In the income statement for the 12 months ended 31 December 20X4, a gain of £85,000 (2.1 million – (2 million + 15,000)) is recognised as a fair value gain.

Initial cost on 1 January 20X4 = £2m + £15,000
 = £2.015m

Fair value at 31 December 20X4 = £2.1m

Fair value gain = £85,000

2.3.5 Financial Assets

Financial assets are dealt with under the accounting standards IAS 32 'Financial Instruments: Presentation' and IFRS 9 'Financial Instruments'. The latter deals with classification, measurement, impairment, hedging, recognition and derecognition of financial assets and financial liabilities.

Financial assets are:

- cash
- shares in another company
- a contractual right to receive cash (ie, an investment in debt securities) or lending another company money (for example, bonds), and
- a derivative contract that is 'in the money' (ie, on favourable terms).

Initial Measurement

Financial assets are initially measured at fair value which is normally the purchase price of the instrument. For example, if a company invests in shares or debt securities, the purchase price is the fair value. Any brokerage costs are added to the purchase price.

Subsequent Accounting Treatment

The subsequent treatment of financial assets depends on the type of instrument that has been invested in, the characteristics of its cash flows and the reason why the company holds the investment.

Asset Category	Description	Accounting Treatment
Investments in debt instruments	Business model test – The investor keeps the investment to collect the interest and repayment of capital. Cashflow characteristic test – The cash flows are only the interest and the capital repayment to the investor on maturity. In other words, solely payments of principal and interest on the principal amount outstanding (SPPI).	The investment is measured at amortised cost using the effective interest rate. Interest income using the effective rate is recognised in the income statement.
Investments in debt instruments	Business model test – The investor keeps the investment to both collect the interest and repayment of capital, and to sell the investment. Cashflow characteristic test – The cash flows are only the interest and the capital repayment to the investor on maturity. In other words, solely payments of principal and interest on the principal amount outstanding (SPPI).	The investment is measured at fair value through other comprehensive income (FVTOCI) . Any fair value gains or losses are shown below the profit for the year figure in the income statement, in a different statement called statement of other comprehensive income.
Investments in debt instruments	A fair value option is applied, or the investment is held for trading, or the investment does not meet the descriptions above.	The investment is measured at fair value through profit or loss (FVTPL) . Any fair value gains or losses are shown in the income statement.
Investments in shares (equity instruments)	Typical treatment.	The investment is measured at FVTPL. Any fair value gains or losses are shown in the income statement.
Investments in shares (equity instruments)	An election is made on the day the shares are purchased to measure them at FVTOCI.	The investment is measured at FVTOCI. Any fair value gains or losses are shown below the profit for the year figure in the income statement, in a different statement called statement of other comprehensive income.

Derivatives	Always measured at FVTPL.	The investment is measured at FVTPL. Any fair value gains or losses are shown in the income statement.
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Example

Company D purchases 1,000 £100 bonds in Company E to hold to maturity and receive the coupons.

The bonds cost Company D £100,000 (1,000 x £100). The bonds pay interest at 8%, have a maturity of three years, and when they are repaid after three years, a premium of £10,026 applies to the redemption amount so £110,026 (£100,000 + £10,026) is repaid. The bonds have an effective interest rate of 11%.

The amortised cost table is:

Year	Brought forward balance	Effective interest rate of 11%	Interest paid at 8% (8% x £100,000)	Carried forward balance
1	100,000	11,000	(8,000)	103,000
2	103,000	11,330	(8,000)	106,330
3	106,330	11,696	(8,000)	110,026

The interest income in the income statement in Year 1 is £11,000.

The carrying amount of the statement of financial position at the end of Year 1 is £103,000.

Example

Company F buys government bonds for £12,000. The bonds have a market price of £14,400 at the year-end reporting date.

The bonds are measured at fair value through profit or loss.

A fair value gain of £2,400 (£14,400 – £12,000) is recognised in the income statement and the value of the investment on the statement of financial position at year end is £14,400.

Example

Company G buys 500 shares in Company H for £86.13 per share. The shares are measured at FVTPL.

At the year-end, the market price has fallen to £78.90 per share.

A fair value loss of £3,615 ($500 \times (£78.90 - £86.13)$) is recognised in the income statement and the value of the investment on the statement of financial position at year end is £39,450 ($500 \times £78.90$).

2.3.6 Intangible Assets

Intangible assets are a particular type of non-current asset.

Intangibles are **identifiable** non-monetary assets without physical substance.

Identifiable means that you can separate the intangible from the rest of the business and sell it (eg, a brand name or licence). Identifiable intangible assets could also arise from contractual or other legal rights.

Internally generated goodwill cannot be separated from the rest of the business, so this does not meet the definition and cannot be capitalised as an intangible asset.

Non-monetary means the asset is not cash.

Being without physical substance means you cannot touch it.

In common with other assets, to be recognised an intangible asset must also be controlled by the company, have probable future economic benefits and be able to be measured with reliability.

Different Types of Intangible Assets

Separate Acquisition

An intangible asset like a licence or patent can be bought separately and typically meets the definition for recognition.

Example

Company H buys a patent for its innovative new product. The patent costs £100 and the legal fees to make sure the design is protected cost £22,000.

The patent is an intangible asset that must be capitalised on the statement of financial position.

The initial cost will be £22,100 (ie, the cost of £100 plus directly attributable costs of £22,000).

Acquisition as Part of a Business Combination

Company A buys all of the shares in Company B. As part of the acquisition, Company A will control a trademark owned by Company B. This trademark can be measured separately as an intangible asset as long as it can be measured at fair value on the acquisition. In reality, this would be undertaken by a specialist valuation company as trademarks can be difficult to value.

Research and Development

The accounting rules are very strict regarding whether expenditure on research and development (R&D) can be capitalised as an intangible asset. The difficulty is determining at what point the definition of an intangible is met. For example, if a pharmaceutical company is developing a new migraine medicine, initial research may not produce anything that works. Further development of a medicine that proves effective may include clinical trials. At some point during this process, the criteria are met and expenditure can begin to be capitalised. Before the development phase, research costs must be expensed. From the point at which the accounting criteria are met, the development phase begins and costs must be capitalised from this point.

The criteria for capitalising expenditure on development is:

- the project must be technically feasible so it can be completed
- it is the intention to complete the project and use or sell it
- the company is able to use or sell the project
- there is a market for the project (ie, it will generate future economic benefits)
- there are adequate technical, financial and other resources to complete the project, and
- expenditure can be measured reliably.

Example

Company J has a new one-coat paint technology that is developed. Company J spent £25,000 working with different paint formulas before it found one that had good coverage with just one coat.

Company J then secured a bank loan for £50,000 which will pay for further development of the formula, testing for consistency and the development of a new paint spraying system.

Company J is committed to completing this project, has staff members with adequate expertise to complete the next steps and has a contract to sell the paint to a large network of shops, who believe the product will sell well. From the date that the bank loan was secured, Company J has spent a further £33,000 on the new, one-coat paint.

The expenditure of £25,000 is before the criteria is met as research is being undertaken. Therefore, £25,000 is expensed to the income statement.

The date on which the bank loan was secured indicates that the criteria for an intangible development asset has been met. The project is technically feasible because of the good coverage, and there are sufficient financial and human resources to complete the project. The intention is to complete the project and there is a market because shops are willing to stock it for sale.

Therefore, the £33,000 spent since the bank loan was secured is a development asset and should be capitalised on the statement of financial position.

Initial Measurement

Initially, an intangible asset is recognised at cost plus directly attributable costs. The cost must be capitalised only from when the criteria is met. Costs could include materials used to generate the intangible asset and employee expenses for those directly involved in generating the intangible asset.

Subsequent Measurement

Intangible assets may be measured in a similar way to PPE in that the carrying amount may reduce over time. For intangible assets, this is called amortisation rather than depreciation. It is calculated in a similar way to depreciation on PPE but there is unlikely to be any residual value for an intangible asset.

Some intangible assets may have an indefinite life, so the useful life is unknown. In this case, no amortisation is charged but there must be an annual impairment review to make sure the value of the intangible has not fallen below its carrying amount in the financial statements.

It is rare for an intangible asset to be revalued because intangible assets by their nature are unique and so a reliable valuation is difficult to justify.

2.3.7 Deferred Tax Assets

As mentioned in chapter 1, deferred tax assets arise when there is a deductible temporary difference or unused tax losses.

If a company has tax losses in a year and it estimates that it will be profitable in the future and will be able to use those tax losses, it can recognise the future tax saving by creating a deferred tax asset and reducing the tax charge in the income statement in the current year.

2.4 Stranded Assets

2.2.4 Know the impact of stranded assets on the statement of financial position and income statement

Although not explicitly defined in accounting standards, stranded assets are those assets that were expected to have economic benefits over a number of years into the future but are now expected to have a much lower or zero carrying amount.

The term 'stranded assets' is often used to describe assets that have fallen in value because of environmental risks. These include:

- the impact of extreme weather and rising sea levels on low-lying island holiday resorts
- the impact of the transition to a net zero economy through reducing reliance on , for example, diesel cars, and
- reducing the useful lives of oil and gas assets.

Stranded assets must either be written off if no recoverable amount remains, or reduced in value. Any fall in value is taken to the income statement as an expense. The statement of financial position should show the recoverable amount at the reporting date.

3. Liabilities

3.1 Current Versus Non-Current Liabilities

2.3.1 Understand the difference between current and non-current liabilities

Liabilities are classified as either current or non-current. A current liability is expected to be settled within 12 months of the reporting date. A **non-current liability** is expected to be settled more than 12 months after the reporting period.

This distinction is designed to demonstrate items that are continuously circulating in the operating cycle of a business, such as trade payables, compared to those balances that reflect the long-term financing.

3.2 Current Liabilities

2.3.2 Know the different types of current liabilities

Current liabilities are expected to be settled in the normal operating cycle of the business, or are held for trading, and are expected to be settled within 12 months of the reporting period.

Payables represent one type of current liabilities. They represent amounts owed to suppliers that must be paid within the credit terms offered, which could be 60 or 90 days.

Accruals are amounts owed to other parties which have not yet been billed. This could include rentals, utility bills such as electricity, or other expenses. These accrued amounts will be settled within 12 months when the bill is received.

Some financing items are shown as current liabilities if the payment terms require payment in cash within the 12 months of the reporting date.

3.3 Non-Current Liabilities

2.3.3 Know the different types of non-current liabilities and the measurement bases for initial recognition and subsequent valuation of the following non-current liabilities: bonds; leases; deferred tax liabilities

3.3.1 Bonds

Bonds are a financial liability of the company where finance is raised by borrowing money and this cash must be repaid in the future. Interest is typically payable for the period of borrowing.

Initial Measurement

Bonds are initially measured at fair value which is the amount borrowed, less any fees. In other words, if £50,000 is raised in borrowed funds and fees of £1,500 are paid; the initial measurement is the net proceeds of £48,500 (£50,000 – £1,500).

Subsequent Measurement

The subsequent treatment of bonds in the statement of financial position is measured at amortised cost. This uses the effective rate of interest of the bond, also known as the internal rate of return (IRR). The interest expense in the income statement is calculated using the effective interest rate.

Example 1

Company K raises cash of £5 million through the issue of bonds. The bonds have a coupon (cash interest) rate of 6% per annum (pa). The bonds will be redeemed in five years at a premium of 10%. The effective rate of interest is 7.715% pa.

Calculate the amortised costs for these bonds for all five years to maturity. Show the income statement and statement of financial position amounts at the end of Year 1.

The effective interest for each year is the figure that is shown in the income statement. It is calculated as the effective interest rate multiplied by the brought forward balance in that year. The interest paid at 6% is the cash interest which will be shown in the statement of cash flows. The interest rate of 6% is always multiplied by the nominal amount of the bond. The carried forward balance is the sum of the movements in the year and is the figure that is shown in the statement of financial position for the year end.

Amortised cost table:

Year	Brought forward balance	Effective interest rate of 7.715%	Interest paid at 6% (6% x £5m)	Carried forward balance
1	5,000,000	385,750	(300,000)	5,085,750
2	5,085,750	392,366	(300,000)	5,178,116
3	5,178,116	399,492	(300,000)	5,277,607
4	5,277,607	407,167	(300,000)	5,384,775
5	5,384,775	415,435	(300,000)	5,500,210

Note: there is a rounding difference of £210 at the end of Year 5 because the redemption amount is £5 million x 110% = £5.5 million. The rounding error arises because the effective rate is rounded to 3 decimal places of 7.715%.

At the end of year 1	
Income Statement	
Finance Cost	£385,750
Statement of Financial Position	
Total Liability	£5,085,750

Example 2

Company N raises cash of £5 million through bank borrowings. The repayments are £1.3 million per year for five years. The effective rate of interest is 9.435% pa.

Calculate the amortised costs for these bonds for all five years to maturity. State the income statement and statement of financial position amounts at the end of Year 1.

Amortised cost table:

Year	Brought forward balance	Effective interest rate of 9.435%	Repayment	Carried forward balance
1	5,000,000	471,750	(1,300,000)	4,171,750
2	4,171,750	393,605	(1,300,000)	3,265,335
3	3,265,335	308,086	(1,300,000)	2,273,441
4	2,273,441	214,499	(1,300,000)	1,187,940
5	1,187,940	112,082	(1,300,000)	22

Note: there is a rounding difference of £22 at the end of Year 5 because the effective rate is rounded to 3 decimal places of 9.435%.

At the end of year 1	
Income Statement	
Finance cost	£471,750
Statement of Financial Position	
Non-current liability	£3,265,335
Current liability (1,300,000 – 393,605)	£906,395
Total liability	£4,171,750

3.3.2 Leases

In a leasing transaction, there is a contract between the lessor and the lessee for the hire of an asset. The lessor retains legal ownership, but the lessee has the right to use the asset for an agreed period of time in return for rental payments. IFRS 16 Leases sets out the accounting treatment for **leases**.

Definitions:

- **Lease** – a contract that conveys the right to use an asset for a period of time in exchange for payment.
- **Right-of-use asset** – the asset that the lessee has the right to use.
- **Lease term** – the non-cancellable period for which a lessee has the right to use the underlying asset, together with both:
 - periods covered by an option to extend the lease if the lessee is reasonably certain to exercise that option, and
 - periods covered by an option to terminate the lease if the lessee is reasonably certain not to exercise that option.

Accounting for Leases – Lessees and Lessors

Companies have a choice about funding asset purchases. They can choose to purchase the asset upfront for an initial payment, or they can choose to lease the asset and effectively pay for it over a number of years.

A lessee chooses to use a lease to fund the 'acquisition' of an asset which will then be used in the business, perhaps for many years. Legally, the lessor owns the asset, but the lessee is receiving economic benefits from using the asset and therefore the lessee recognises the asset in its balance sheet. The right-of-use asset meets the definition of an asset for the lessee.

Accounting Treatment – Balance Sheet

On inception of the lease, the lessee recognises a right-of-use asset and a lease liability to pay for the contract over the lease term. In the lessee's books therefore:

- increase assets, and
- increase liabilities.

The amount to be recognised is the present value of lease payments which have not yet been paid. The lease payments are discounted using the interest rate implicit in the lease. If this cannot be determined, the lessee's incremental borrowing rate must be used.

At each year-end, the right-of-use asset should be depreciated over the shorter of:

- the lease term, and
- the asset's useful life.

The lease liability is measured at amortised cost which means interest accrues on the lease liability, and cash payments to the lessor must be recognised.

At each year-end, the lessee discloses the carrying amount of the right-of-use asset and the lease liability, split between current and non-current liabilities.

Example

On 1 January, a company enters into the lease of an asset. The present value of the lease payments is £255,000. The terms of the lease are that five six-monthly instalments of £60,000 are to be paid in arrears (ie, a total of £300,000 must be paid). In addition, the lessee can extend the lease to a full four years and will probably do so, as it is probable that the asset will continue to be useful for that time.

The rent for this secondary period is negligible.

How will the asset be reflected in the accounts of the company for the next four years? The rate of interest implicit in the lease is 5.7% per instalment.

Solution

Amount Capitalised on Inception of the Lease

The initial measurement is the present value of the lease payments which is £255,000. The impact on the accounts on 1 January will be:

- Non-current assets increase £255,000.
- Liabilities increase £255,000 (representing the lease liability now payable).

Lease Term

Primary term – for finance charge allocation

In this example, the total finance charge should be allocated over the primary lease term of 2.5 years. The total finance charge is the difference between the total amount being paid and the capitalised value of the asset (which equals the initial value of the loan). In this example, the total finance charge is £45,000 (£300,000 – £255,000).

Full lease term – for depreciation

The full lease term in this example is four years, the period over which the lessee can, and is expected to, use the asset. This, therefore, represents the time over which we should depreciate the asset, ie, the annual depreciation charge should be £63,750 (£255,000 / 4 years) assuming straight-line depreciation.

Over the next four years, this asset will appear on the balance sheet as follows:

Non-Current Assets	Year 1 (£'000)	Year 2 (£'000)	Year 3 (£'000)	Year 4 (£'000)
Cost	255.00	255.00	255.00	255.00
Accumulated Depreciation	(63.75)	(127.50)	(191.25)	(255.00)
Net Book Value	191.25	127.50	63.75	0

Apportionment of Rental Payments

When the lessee makes a cash payment to the lessor, it comprises two elements:

- An interest charge on the finance provided by the lessor. This proportion of each payment is interest payable in the income statement of the lessee.
- A repayment of part of the capital cost of the asset. In the lessee's books, this proportion of each rental payment must reduce the outstanding liability.

The accounting problem is to decide what proportion of each instalment paid by the lessee represents interest, and what proportion represents a repayment of the capital advanced by the lessor.

Analysis of Payments

There are two apportionment methods to calculate how much of the finance charge is allocated to each payment:

- the actuarial method, and
- the sum-of-digits method (as an approximation to the actuarial method).

We will illustrate both to show that the two methods generate substantially similar results.

Actuarial Method

Using the rate of interest implicit in the lease of 5.7% per instalment, we can calculate the following repayment schedule in an amortised cost table.

Period	Lease Liability b/f (£'000)	Interest Charge at 5.7% (£'000)	Paid (£'000)	Difference (Capital Repaid) (£'000)	Lease Liability c/f (£'000)
Year 1					
1 Jan–30 June	255.0	14.5	(60.0)	45.5	209.5
1 July–31 Dec	209.5	11.9	(60.0)	48.1	161.4
Year 2					
1 Jan–30 June	161.4	9.2	(60.0)	50.8	110.6
1 July–31 Dec	110.6	6.3	(60.0)	53.7	56.9

Year 3					
1 Jan–30 June	56.9	3.1	(60.0)	56.9	–
		45.0	300.0	255.0	

Over the primary term of 2.5 years, £300,000 is paid in total, which is split into £45,000 total finance charge and £255,000 capital repaid, as expected.

Looking down this table, it is clear that the loan balance outstanding at the end of Year 1 is £161,400. Looking further down the table, £56,900 is still outstanding at the end of Year 2 and the liability is cleared during Year 3. These, therefore, represent the full year-end liabilities at those dates.

It is necessary to split these balances between amounts reflected as current and non-current liabilities.

Liabilities	Year 1 (£'000)	Year 2 (£'000)	Year 3 (£'000)	Year 4 (£'000)
Current	104.50	56.90	–	–
Non-current	56.90	–	–	–
Total liability	161.40	56.90	–	–

Sum-of-Digits Method

To utilise this alternative method, first add up the digits corresponding to the number of payments to be made, ie, $5 + 4 + 3 + 2 + 1 = 15$. This is then used to allocate the total finance charge of £45,000 as below.

Alternatively, the sum of digits can be calculated using the following formula:

$$(n(n + 1)) / 2$$

Where 'n' is the number of instalments. Therefore, in our example:

$$(5(5 + 1)) / 2 = 15$$

Payment	Finance Charge	(£'000)
1	5/15 x 45,000	15
2	4/15 x 45,000	12
3	3/15 x 45,000	9
4	2/15 x 45,000	6
5	1/15 x 45,000	3

Hence, the repayment schedule using the sum-of-digits approach looks as follows:

Period	Lease Liability b/f (£'000)	Interest Charge (£'000)	Paid (£'000)	Difference (Capital Repaid) (£'000)	Lease Liability c/f (£'000)
Year 1					
1 Jan–30 June	255	15	(60)	45	210
1 July–31 Dec	210	12	(60)	48	162
Year 2					
1 Jan–30 June	162	9	(60)	51	111
1 July–31 Dec	111	6	(60)	54	57
Year 3					
1 Jan–30 June	57	3	(60)	57	–
		45	300	255	

The figures are substantially similar to those calculated under the actuarial method, with a liability at the end of Year 1 of £162,000, compared to £161,400 under the actuarial method.

The finance charge for this year is very similar under both methods, being £27,000 (£15,000 + £12,000) under the sum-of-digits method and £26,400 (£14,500 + £11,900) under the actuarial method.

Using the actuarial method, the statement of financial position and income statement extracts are as follows:

Statements of Financial Position

Non-Current Assets	Year 1 (£'000)	Year 2 (£'000)	Year 3 (£'000)	Year 4 (£'000)
Cost	255.00	255.00	255.00	255.00
Depreciation	(63.75)	(127.50)	(191.25)	(255.00)
Net Book Value	191.25	127.50	63.75	0.00
Liabilities:				
Current	104.50	56.90	–	–
Non-Current	56.90	–	–	–
Total Liability	161.40	56.90	–	–

Income Statements

	Year 1 (£'000)	Year 2 (£'000)	Year 3 (£'000)	Year 4 (£'000)
Depreciation	63.75	63.75	63.75	63.75
Interest Charge	26.40	15.50	3.10	–
	90.15	79.25	66.85	63.75

Accounting for Short Leases or Leases of Low Value Assets

If the lease term is 12 months or less (and contains no purchase options), the lessee can recognise lease payments in the income statement on a straight-line basis.

If the underlying asset has a low value (the IASB has suggested \$5,000 as a guide), the lease payment is shown as an expense in the income statement on a straight-line basis over the lease term. The annual expense is calculated as the total payments over the lease term divided by the number of years.

Any difference between amounts charged to profit and amounts paid in cash will be prepayments or accruals. There is no liability recognised for the future amounts payable under the lease terms.

3.3.3 Deferred Tax Liabilities

As mentioned in chapter 1, deferred tax liabilities arise when there is a taxable temporary difference.

For example, if a company has accelerated capital allowances meaning that taxable profit is lower than accounting profit but this will reverse in the future, the company can recognise the future tax liabilities by creating a deferred tax liability and increasing the tax charge in the income statement in the current year.

4. Equity

2.4.1 Know the components of shareholders' equity

2.4.2 Understand the differences between issued share capital, capital reserves and retained earnings

Shareholders' equity consists of all balances that reflect the equity shareholders' interests in the company. These include:

- ordinary share capital
- share premium (the excess of issue price over the nominal value of the shares issued)
- retained earnings (accumulated profits/losses since incorporation)
- revaluation reserve (if non-current assets are revalued), and
- other reserves (if the company wishes or is required to keep some retained earnings separate).

There are other reserves that could sit within equity and shareholders' funds; these could include reserves relating to foreign subsidiaries, financial assets and liabilities, and hedging.

Prior to 2009, authorised share capital was the number of shares that a UK company was allowed to issue in total in accordance with its memorandum and articles of association. Following an amendment in 2009 to the Companies Act 2006, authorised share capital is no longer a concept. A resolution can be passed to limit share capital in the articles of association but this can be amended or revoked by an ordinary vote. The actual number of shares that the company has issued is its issued share capital.

Retained earnings are the cumulative profits or losses that a company has generated since its incorporation. Retained earnings can be used to pay dividends to shareholders or to fund expansion and growth in the business. Other reserves are an element of equity that can be set aside for a particular purpose. Capital reserves are a reserve where profits and losses from selling non-current assets can be set aside.

Example

Company P has profits for the year of £670,000. Included in the £670,000 were profits on the disposal of non-current assets of £45,000.

Cumulative profits to the beginning of the current year were £3.5 million.

Company P decides to create a capital reserve this year.

Show an extract from shareholders' funds in the statement of financial position at the end of the year.

Extract from Statement of Financial Position	
Retained earnings ($£3,500,000 + 670,000 - 45,000$)	4,125,000
Capital reserve	45,000

End of Chapter Questions

Think of an answer for each question and refer to the appropriate section for confirmation.

1. Categorise the following balances between current, non-current assets, or both depending on the nature of the balance.

Asset	Current or non-current or both
Inventories	
PPE	
Investments	
Intangible assets	
Cash	
Shares held for trading	
Trade receivables	

Answer reference: Section 2.1

2. Initial measurement of PPE and depreciation Company A buys a new building for its administrative staff for £5.1 million. Legal fees on the purchase are £120,000 and taxes on the transfer of property are £150,000. The building had previously been a family home so extensive renovations were needed for it to function as an office building. The cost of these renovations totalled £325,000.

The building is expected to be used for 10 years at which point its residual value is estimated at £3 million.

Calculate the depreciation per year on this office building.

Answer reference: Section 2.3.1

3. Company B owns a factory to make petrol cars. The carrying amount of this asset is £516 million. Due to government legislation in the country in which Company B operates, new petrol cars may no longer be sold after the end of the year and the production line must be changed to produce electric cars. The existing production line can be sold for parts for £120 million, after work has been undertaken to remove intellectual property which will cost £15 million. Otherwise, the production can be repurposed for other items that Company B produces which has a value in use of £130 million.

Is the factory asset impaired? If so, calculate the impairment loss

Answer reference: Section 2.3.2

4. Question Company C purchases a property as an investment for £30 million. Its intention is to realise capital gains when it is sold. Company C categorises this property as an investment property and decides to apply the fair value model for its investment property. The value of the property at year end is £33 million. The property is expected to be sold in 5 years.

How should the investment property be recognised in Company C's financial statements.

Answer reference: Section 2.3.4

5. Company D purchases 300 £100 government bonds with an interest rate of 5.5%. The maturity is 3 years and the bonds are redeemed at par so the effective rate of interest is 5.5%.

Show the amortised cost table for the 3 years of the bond. Describe how the investment is shown in Company D's financial statements for the first year.

Answer reference: Section 2.3.5

6. Company E purchases a licence to use cartoon characters on its clothing products for the next 5 years. The licence costs £30 million. Explain how the licence should be accounted for in Company E's financial statements.

Answer reference: Section 2.3.6

7. Company H has a manufacturing facility in Pluland. There has been flooding in the area because of extreme weather events and the plant has been damaged.

How should Company H deal with this in its financial statements?

Answer reference: Section 2.4

8. Company F has taken out borrowings of £400,000 from a lender at a rate of 7.7% per annum. The loan is repayable after 4 years for a total of £448,480 and interest is paid annually in arrears ie, at the end of each year. The effective interest rate is 10.3%.

Calculate the amortised cost table for the borrowing for all 4 years to maturity. State the income statement and statement of financial position amounts at the end of Year 1.

Answer reference: Section 3.3

9. On 1 January 20X4, Company G enters into a lease for a warehouse. The lease is for 3 years and the present value of lease payments is £450,000. Payments are made annually on 31 December each year. The annual payment is £185,000.

The interest rate implicit in the lease is 11.267%.

How will the lease be reflected in Company G's financial statements for the next 3 years?

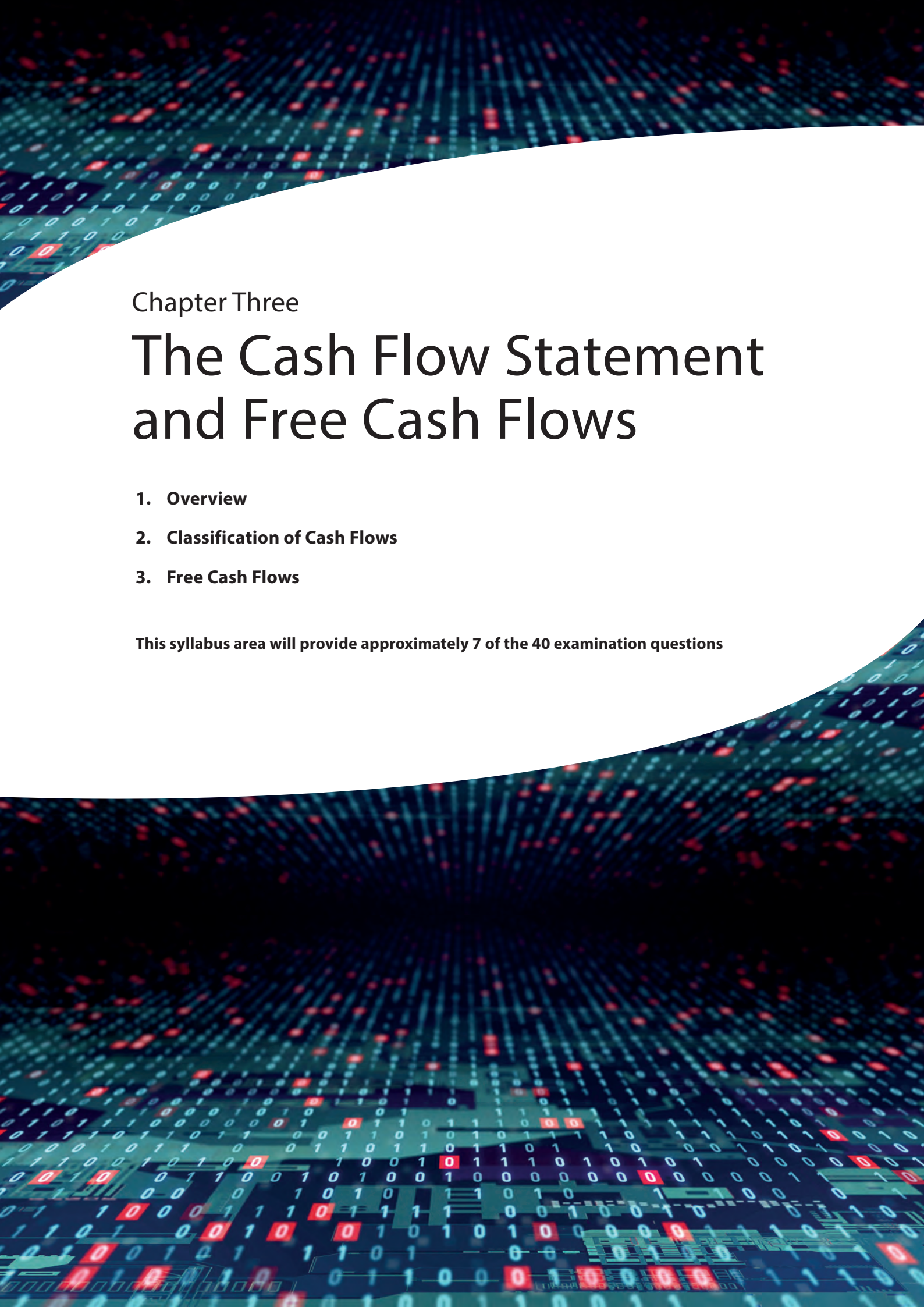
Answer reference: Section 3.3.2

10. Company J has 2 million £1 ordinary shares in issue that were issued at a price of £34.22 on its initial public offering (IPO). Company J generates profits of £5.6 million in the current year. It had accumulated profits to the start of the year of £88 million and amounts set aside in a capital reserve of £21 million.

Included in the £5.6 million profit for the year is £300,000 relating to the disposal of intangible and physical assets.

Prepare shareholders' funds in the statement of financial position.

Answer reference: Section 4

The background of the slide is a dark, abstract design featuring a grid of glowing blue and red lines that create a sense of depth and perspective, resembling a digital or data landscape. Binary code (0s and 1s) is scattered throughout the scene, with some digits highlighted in red.

Chapter Three

The Cash Flow Statement and Free Cash Flows

1. Overview
2. Classification of Cash Flows
3. Free Cash Flows

This syllabus area will provide approximately 7 of the 40 examination questions



1. Overview

3.1.1 Understand the purpose, format and main contents of the statement of cash flows

1.1 Purpose of the Statement of Cash Flows

The aim of the cash flow statement is to provide information to users of financial statements about the entity's ability to generate cash and cash equivalents, as well as indicating the cash needs of the entity. The cash flow statement provides historical information about cash and cash equivalents, classifying cash flows between operating, investing and **financing activities**.

A cash flow statement should be presented as an integral part of an entity's financial statements. All types of entity can provide useful information about cash flows as the need for cash is universal, whatever the nature of their revenue-producing activities.

The use of a cash flow statement is very much in conjunction with the rest of the financial statements. Users can gain further appreciation of the change in net assets, of the entity's financial position (liquidity and solvency), financial performance (profitability), and the entity's ability to adapt to changing circumstances by affecting the amount and timing of cash flows. A cash flow statement enhances comparability as it is not affected by differing accounting policies used for the same type of transactions or events.

Cash flow information of a historical nature can be used as an indicator of the amount, timing, and certainty of future cash flows. Previous forecast cash flow information can be checked for accuracy as actual figures emerge. The relationship between profit and cash flows can be analysed.

1.2 Format of the Statement of Cash Flows

The following is an example statement of cash flows from the accounting standard IAS 7 – Statement of Cash Flows:

Cash Flow Statement for the Year		20X2
Cash flows from operating activities		
Profit before taxation	3,350	
Adjustments for:		
Depreciation	450	
Foreign exchange loss	40	
Investment income	(500)	
Interest expense	<u>400</u>	
	3,740	
Increase in trade and other receivables	(500)	
Decrease in inventories	1,050	
Decrease in trade payables	<u>(1,740)</u>	
Cash generated from operations	2,550	
Interest paid	(270)	
Income taxes paid	<u>(900)</u>	
Net cash from operating activities		1,380
Cash flows from investing activities		
Acquisition of subsidiary, net of cash acquired	(550)	
Purchase of property, plant and equipment (PPE)	(350)	

Proceeds from sale of equipment	20	
Interest received	200	
Dividends received	<u>200</u>	
Net cash used in investing activities		(480)
Cash flows from financing activities		
Proceeds from issue of share capital	250	
Proceeds from long-term borrowings	250	
Payment of lease liabilities	(90)	
Dividends paid	<u>(1,200)</u>	
Net cash used in financing activities		<u>(790)</u>
Net increase in cash and cash equivalents		110
Cash and cash equivalents at beginning of period		<u>120</u>
Cash and cash equivalents at end of period		<u>230</u>

1.2.1 Main Contents of the Statement of Cash Flows

Generally accepted accounting practice standards give definitions such as the following, the most important of which are cash and cash equivalents.

- **Cash** comprises cash on hand and demand deposits.
- **Cash equivalents** are short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.
- **Cash flows** are inflows and outflows of cash and cash equivalents.
- **Operating activities** are the principal revenue-producing activities of the entity and other activities that are not investing or financing activities.

- **Investing activities** are the acquisition and disposal of long-term assets and other investments not included in cash equivalents.
- **Financing activities** are issues of (cash receipts) or repayments of (cash payments) debt or equity.

The accounting standard on cash flow statements, IAS 7, expands on the definition of cash equivalents: they are not held for investment or other long-term purposes, but rather to meet short-term cash commitments. To fulfil the above definition, an investment's **maturity** date should normally be within three months from its acquisition date. It would usually be the case then that equity investments (ie, shares in other companies) are not cash equivalents.

Loans and other borrowings from banks are classified as financing activities. However, bank overdrafts are repayable on demand and are treated as part of an entity's cash management, so an overdrawn balance will be included in cash and cash equivalents.

Movements between different types of cash and cash equivalents are not included in cash flows. The investment of surplus cash in cash equivalents is part of cash management, not part of operating, investing or financing activities.

2. Classification of Cash Flows

2.1 Accrual Versus Cash Accounting

3.2.1 Know the difference between cash transactions from non-cash transactions

Revenue and expenses in the income statement are recognised on an accruals basis which can often differ from the cash position. An accruals basis reflects transactions based on the period to which they relate rather than when cash is received or paid. This is why both the income statement and cash flow statement are important documents for the analyst, providing information about different aspects of the company's performance over the period and position at the reporting date. It is perfectly possible for a company to be both highly profitable and have a very poor liquidity (cash flow) position.

Business trade certainly causes cash to move, for example when customers pay or suppliers are paid, therefore trade does impact on cash flows. However, not all income statement items result in an immediate cash flow or even any cash flow at all, for example:

- **Depreciation** – the cash flow arises when a non-current asset is purchased; the income statement depreciation charge is an accounting measure to reflect the use of the non-current asset over time and is not a cash flow.
- **Sales on credit/purchases on credit** – cash flows in relation to these items arise when the amounts are actually received/paid, which is after they have been reflected as revenues/expensed within the income statement.

- **Accrued expenses/prepaid expenses** – cash flows arise when these expenses are settled in cash which, again, differs from when they are recognised in the income statement.

Cash also moves for other reasons, for example buying subsidiaries, raising share capital or loans.

The following are all important advantages that come from the availability of cash flow information and justify the requirement for a cash flow statement.

- Cash is highly relevant to a company's survival. One of the reasons that lenders foreclose on loans is due to unavailability of cash to pay interest or capital repayments on debt.
- Many users, especially lenders, make their business decisions based on cash flow analysis.
- It may be possible to identify creative accounting through a comparison of cash flow with profits. Creative accounting is where companies can try to manipulate the income and expense shown in a given year to make their results, or change in performance, appear better.
- The format of the cashflow statement enables analysts to identify operating cashflows including investments in working capital, the run rate in capital expenditure (capex) spend and funding sources.

2.2 Cash Flow Classifications

3.2.2 Be able to apply the following cash flow classifications: cash flow from operating activities (CFO); cash flow from investing activities (CFI); cash flow from financing activities (CFF)

Cash flow from operating activities (CFO) represent cash flows from day-to-day operations of the business. They include cash receipts from selling goods and services, cash payments to suppliers, cash payments to employees, and cash payments of tax.

In a clothing retailer, there could be a gain on the sale of premises that is recognised in the income statement but this must be adjusted in the cash flow statement so that it shows in investing activities because buying and selling premises is not a day-to-day operation of a clothing retailer business.

Cash flows from operating activities can be reported using the direct or indirect method. The direct method reports cash receipts and cash payments obtained from the accounting records and has operating cash flows such as cash receipts from customers and cash paid to suppliers.

Cash generated from operations under the direct method	£
Cash received from customers	X
Cash payments to suppliers	(X)
Cash payments to employees	(X)
Cash generated from operations	X

Under the indirect method, the working for operating cash flows starts with accounting profit and adjusts it for changes in working capital, and non-cash items such as depreciation. The indirect method will be looked at further in section 2.3.

Investing activities represent cash flows relating to resources expected to generate future income eg non-current assets like plant and machinery, or an investment in another company. Only transactions that relate to balance sheet items can be classified in investing activities.

Some examples of investing activities are: buying PPE or intangibles; selling PPE or intangibles; money spent on constructing or developing a non-current asset; payments to buy the shares in another company (ie, investments); and receipts from selling shares in another company.

Financing activities represent cash flows with providers of finance to the business. They include cash proceeds from issuing shares, payment to buy back a company's own shares, cash proceeds from taking out borrowings, cash repayments of amounts borrowed, and cash payments on a lease.

Interest and dividends, there is variability about where interest paid and interest and dividends received should be classified. They could be classified in operating cash flows because they form part of profit or loss. Alternatively, interest paid could be classified as a financing cash flow as the cost of obtaining funding. Similarly, interest and dividends received could be classified as investing cash flows because they are returns on investment.

2.3 Cash Flow From Operating Activities

3.2.3 Understand the significance of cash flow from operating activities (CFO) using the indirect method

3.2.4 Be able to calculate cash flow from operating activities (CFO) using the indirect method

In the overview (section 1), we saw an example of a cash flow statement from IAS 7. We're now going to look further at the first section which is cash flows from operating activities. The key figure in this section is cash generated from operations. Using the indirect method, cash generated from operations is calculated by reconciling profit/loss before tax in the income statement to cash generated from operations in the cash flow statement.

The reconciliation is as follows:

Reconciliation of profit/ (loss) before tax to cash generated from operations	£
Profit/(loss) before tax	X/(X)
Interest expense	X
Interest income	(X)
Depreciation/amortisation/impairment	X
(Profit)/loss on disposal of non-current assets	(X)/X
(Increase)/decrease in inventories	(X)/X
(Increase)/decrease in trade and other receivables	(X)/X
Increase/(decrease) in trade payables	X/(X)
Cash generated from operations	X

Interest expense and interest income are removed from profit before tax (PBT) because they are non-cash items. Cash interest paid and cash interest received are dealt with somewhere else in the cash flow statement. In the case of cash interest paid, it is deducted just below cash generated from operations (ie, it is still an operating cash flow but not within the 'cash generated from operations' line).

Depreciation/amortisation/impairment and the profit or loss on disposal on non-current assets are all examples of non-cash items. These are all generated from accounting ideas. The cash flows related to assets are the original purchase price and the sale proceeds. However, these figures are not shown in the income statement which follows the accrual basis of accounting. Instead, depreciation and gains or losses on sale are shown in the income statement. To get back to a 'cash profit' the non-cash items are stripped out.

Movements in working capital are removed. For example, if receivables have increased during the year, this means that the revenue reported in the income statement has not all been received in cash because more customers owe the business cash and are receivables. By deducting the increase in receivables, we move closer to a 'cash profit'.

Example

A company has profit before tax for the year ended 31 December 20X3 of £1,200, after charging depreciation of £180, a loss on disposal of a computer of £50 and amortisation of an intangible of £65.

The statement of financial position at 31 December 20X3 shows:

	20X3	20X2
Inventories	230	278
Trade receivables	540	566
Trade payables	120	155

Calculate the cash generated from operations for the year ended 31 December 20X3.

Solution

		20X3
Profit before tax		1,200
Depreciation (add back)		180
Loss on disposal of computer (add back)		50
Amortisation (add back)		65
Decrease in inventories (add a decrease)		48
Decrease in trade receivables (add a decrease)		26
Decrease in payables (deduct a decrease)		(35)
Cash generated from operations		1,534

2.4 Cash Flow From Investing Activities

3.2.5 Understand the significance of cash flow from investing activities (CFI) including the acquisition or sale of property, plant and equipment (PPE) and long-term investments

3.2.6 Be able to calculate cash flow from investing activities (CFI) including the acquisition or sale of property, plant and equipment (PPE) and long-term investments

3.2.7 Understand the significance of cash flow from financing activities (CFF) including the issuance or repurchase of ordinary shares, debt and the payment of dividends

3.2.8 Be able to calculate cash flow from financing activities (CFF) including the issuance or repurchase of ordinary shares, debt and the payment of dividends

Investing activities include a range of items such as payments to acquire property, plant and equipment (PPE) or sales proceeds when PPE is sold. It also includes payments to acquire equity or debt of another company (ie, investments) and the sale proceeds when these are sold.

If Company A acquires equity in Company B, it means Company A buys some of the shares in Company B. These shares could have been issued by Company B in the past and Company A buys them from previous shareholders, or Company B could issue new shares for fundraising and Company A buys some of these shares.

If Company A acquires debt in Company B, it means Company A lends money to Company B. This could be in the form of a direct loan from A to B or Company A could buy some of Company B's bonds that it issues.

Example

Company C sells some industrial machinery and realises a profit on disposal of £24,000. The machinery originally cost £250,000 and its carrying amount on the date of sale was £88,000.

What were the sale proceeds for the machinery to include in cash flows from investing activities?

The sale proceeds were £112,000 ($88,000 + 24,000$) and this is the cash inflow to report in cash flows from investing activities.

The profit on disposal of £24,000 is included in the income statement and will be deducted in the reconciliation of profit before tax to cash generated from operations because it is a non-cash item.

Example

Company D purchases some bonds issued by Company E for £120,000.

Is this a cash inflow or a cash outflow for Company D?

Company D has purchased an investment and this is a cash outflow for Company D of £120,000 in cash flows from investing activities.

2.5 Cash Flow From Financing Activities

Cash flows from financing activities includes cash receipts from finance providers to the business and cash payments to service or repay this financing. Cash receipts can be from debt or equity financing (ie, issuing debt or issuing new shares). Cash payments can be repayment of loans, share buybacks or dividends paid.

Example 1

Company E has borrowings of £3.4 million at the start of the year and borrowings of £8.5 million the end of the year. How is this reflected in the cash flow statement?

Borrowings have increased by £5.1 million ($8.5 - 3.4$) which means that Company E has taken out further borrowing with associated cash receipts of £5.1 million.

This will show in the cash flow statement as:

Cash inflow from increased borrowings	£5.1 million
---------------------------------------	--------------

Example 2

Company F has the following balances on share capital at the start and end of the period:

	20X3	20X2
Share capital – £1 ordinary shares	55,000	45,000
Share premium	238,000	199,000

How should this be reflected in the cash flow statement?

New shares have been issued in Company F of 10,000 ordinary shares. The shares were issued for more than their nominal value of £1 each and the increase in share premium reflects the excess amount raised on the share issue above the nominal value.

Total cash raised:

	£
Increase in share capital (55,000 – 45,000 x £1)	10,000
Increase in share premium (238,000 – 199,000)	39,000
Total cash raised	49,000

Proceeds from issue of shares £49,000

2.5.1 Summary of Cash Flow Statement

Example

Preparing a Cash Flow Statement

Using the information below, prepare a cash flow statement for the year ended 31 December 20X2.

Income Statement for the Year Ended 31 December 20X2

	£'000
Revenue	1,450
Cost of sales	(900)

Gross profit	550
Distribution costs	(100)
Administrative expenses	(50)
Operating profit	400
Finance costs	(150)
Profit before taxation	250
Taxation	(100)
Profit for the period	150

Note: During the year, a dividend of £50,000 was paid in cash. This represents the dividend proposed out of the profits of the year ended 31 December 20X1. The directors propose to pay a dividend of £60,000 out of the current period's profits. This will be considered for approval by shareholders at the AGM to be held in May 20X3.

Balance Sheet as at 31 December

	20X2	20X1
	£'000	£'000
Non-current assets		
Cost	1,100	950
Accumulated depreciation	390	330
	710	620
Current assets		
Inventories	80	60
Receivables	110	95
Cash at bank and in hand	30	20
	220	175

Total assets	930	795
Current liabilities		
Trade payables	25	13
Bank overdraft	39	35
Tax payable	100	80
	164	128
Non-current liabilities		
Loans	300	351
Total liabilities	464	479
Share capital	200	150
Retained earnings	266	166
Equity	466	316
Total Liabilities and Equity	930	795

Prepare a cash flow statement for the year ended 31 December 20X2.

Solution

Cash Flow Statement for the Year Ended 31 December 20x2

	£'000	£'000
Cash flows from operating activities		
• Operating profit		400
• Depreciation charge for the year (390 – 330)		60

• Increase in inventories (80 – 60)		(20)
• Increase in receivables (110 – 95)		(15)
• Increase in payables (25 – 13)		12
		437
Income taxes paid (-100 + 100 – 80)		(80)
Net cash from operating activities		357
Cash flows from investing activities		
• Non-current assets purchased (1,100 – 950)		(150)
Net cash used in investing activities		(150)
Cash flows from financing activities		
Dividends paid	(50)	
Interest paid	(150)	
Proceeds of issue of shares	50	
Repayment of loans (351 – 300)	(51)	
Net cash used in financing activities		(201)
Net increase in cash and cash equivalents		6
Cash and cash equivalents at the beginning of the period (20 – 35)		(15)
Cash and cash equivalents at the end of the period (30 – 39)		(9)

Note: This solution has classified interest paid as a financing cash outflow. IAS 7 allows interest paid to be treated as an operating cash outflow. Similarly, this answer treats dividends paid as a financing item. IAS 7 also offers the possibility of reporting dividends paid as operating cash outflows.

3. Free Cash Flows

3.1 Introduction

3.3.1 Know the difference between cash flow from operating activities (CFO) (as seen in the cash flow statement) and free cash flow to the firm (FCFF) and free cash flow to equity (FCFE) that are computed outside of the cash flow statement

Free cash flow to the firm (FCFF) is a measure of cash flows available to the firm after operating cash flows and capital expenditure on non-current assets is taken into account. It is typically calculated as operating cash flows from the cash flow statement minus net capital expenditure on non-current assets. FCFF is the cash that is available to return to finance providers or fund other long-term investment for growth in the business. Returns to finance providers could be dividends, share buybacks or reducing debt levels. Reducing FCFF from year to year is not necessarily a negative indicator if the company is investing in its non-current assets for future growth.

FCFF measures how efficient a firm is in generating cash. Investors can use it to determine how much excess cash is available to return to finance providers or for growth. Growing FCFF can be an indicator of higher future profits.

Investors can also use FCFF to value a company. Future FCFF can be discounted to its present value using the weighted average cost of capital (WACC) to generate an enterprise valuation. If net debt is deducted this leaves the value of equity.

FCFF can be turned into free cash flow to equity (FCFE) by deducting financing cash flows relating to debt finance and preferred equity and other debt like instruments that rank ahead of common equity. Financing cash flows include repayments of debt. Future FCFE can be discounted to its present value using the cost of equity to generate an equity value.

FCFF can be distorted by the fact that capital expenditures can vary year to year.

3.2 Reconciliation

3.3.2 Be able to calculate free cash flow to the firm (FCFF) and free cash flow to equity (FCFE) and reconcile the difference between the two

Free cash flow to the firm (FCFF) = Cash from operations + Interest (net of tax) – capital expenditure

Free cash flow to equity (FCFE) = Cash from operations – capital expenditure + net borrowing

Note: Net borrowing = debt issued – debt repaid

Example

Company G has cash from operations of £2.5 million and capital expenditure of £0.9 million. Capital repayments on debt are £0.8 million.

Calculate the FCFF and FCFE.

$$\begin{aligned}\text{FCFF} &= \text{Cash from operations} - \text{capital expenditure} \\ &= 2.5\text{m} - 0.9\text{m} \\ &= \text{£}1.6\text{m}\end{aligned}$$

$$\begin{aligned}\text{FCFE} &= \text{FCFF} - \text{debt repayments} \\ &= 1.6\text{m} - 0.8\text{m} \\ &= \text{£}0.8\text{m}\end{aligned}$$

It is also possible to derive FCFF and FCFE from net income:

- $\text{FCFF} = \text{Net income} + \text{net non-cash items} + \text{Interest (net of tax)} - \text{Capital expenditure} - \text{Change in working capital}$
- $\text{FCFE} = \text{Net income} + \text{net non-cash items} - \text{Capital expenditure} - \text{Change in working capital} + \text{net borrowing}$

It is also possible to derive FCFF and FCFE from earnings before interest and tax (EBIT) or earnings before interest, tax, depreciation and amortisation (EBITDA):

- $\text{FCFF} = \text{EBIT (net of tax)} + \text{Depreciation} - \text{Capital expenditure} - \text{change in working capital}$
- $\text{FCFF} = \text{EBITDA (net of tax)} - \text{Capital expenditure} - \text{change in working capital}$

End of Chapter Questions

Think of an answer for each question and refer to the appropriate section for confirmation.

1. What is the purpose of preparing a cash flow statement and what additional information can it provide to analysts?

Answer reference: Section 1.1

2. Which of the following would be included in cash and cash equivalents and what is the movement from 20X2 to 20X3?

	20X3	20X2
Cash at bank	12,340	11,550
Petty cash	1,800	450
Bank savings account (immediate access)	43,000	31,050
1-year term deposit	50,000	30,000
Bank overdraft	(4,020)	(820)
Total	103,120	72,230

Answer reference: Section 1.2

3. Company A pays its water bills for the year ended 31 March 20X5 as follows:

Payment date	Period the bill relates to	Amount of bill
1 January 20X4	1 January – 30 April 20X4	£20,000
1 May 20X4	1 May – 31 August 20X4	£22,000
1 September 20X4	1 September – 31 December 20X4	£21,800
1 January 20X5	1 January – 30 April 20X5	£24,300
1 May 20X5	1 May – 31 August 20X5	£25,010

What amount for the water bill would show:

- As an operating expense in the income statement for the year ended 31 March 20X5
- As an operating cashflow in the cash flow statement for the year ended 31 March 20X5

Answer reference: Section 2.1

4. Company A undertakes a rights issue of shares. Under which classification would the cash proceeds be reported in Company A's cash flow statement?

Answer reference: Section 2.2

5. Company B has profit before tax of £3,400, interest expense of £530, depreciation of £90 and the following movements of working capital:

Increase in inventories of £21

Decrease in receivables of £55

Decrease in payables of £40

Calculate the reconciliation of profit before tax to cash generated from operations.

Answer reference: Section 2.3

6. Explain why depreciation and amortisation are added back to profit before tax in the reconciliation of profit before tax to cash generated from operations.

Answer reference: Section 2.3

7. Company C purchases a brand name for £600,000 and sells a licence it held generating a profit on disposal of the licence of £175,000. The licence originally cost £300,000 and its accumulated amortisation at the disposal date is £250,000.

What value will be shown in cash flows from investing activities?

Answer reference: Section 2.4

8. Company C purchased a new electric car for £49,000 and sold its old car for £5,000 and received interest on a 3-year term investment of £2,300.

Calculate cash flows from investing activities.

Answer reference: Section 2.4

9. Company D's Statement of Financial Position at 31 December 20X4 includes the following:

	20X4	20X3
	£m	£m
Share capital	50	45
Share premium	100	80
Retained earnings	230	210
Long-term debt	35	55

Retained earnings have increased by £20m since the prior year because the profit for the year was £35m and dividends paid during the year were £15m.

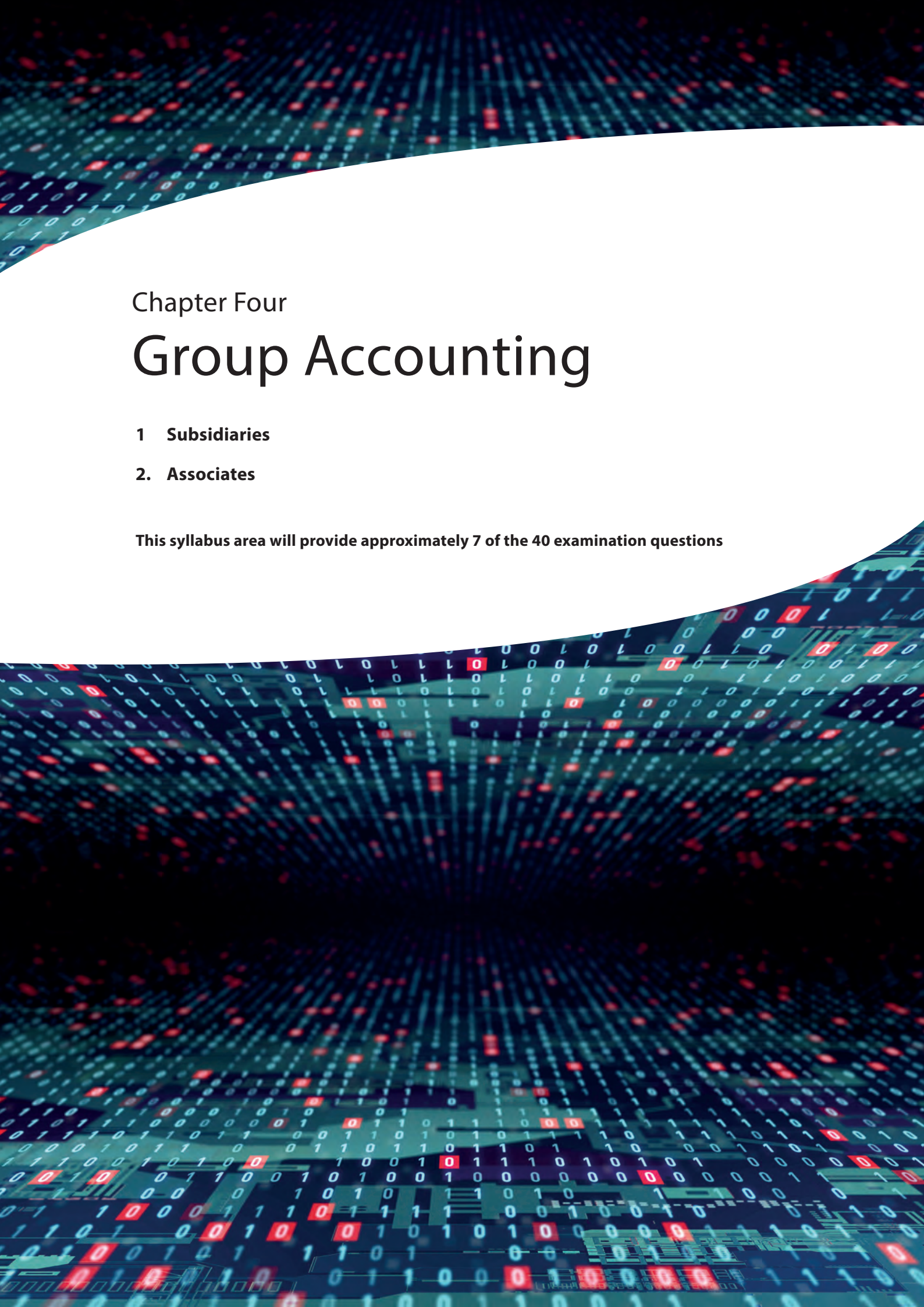
Calculate the cash flows from financing activities.

Answer reference: Section 2.5

10. Company E has cash from operations of £78,000. Capital expenditure during the year was £26,000. Repayment of debt included capital repayments of £20,000 and interest paid of £3,200.

Calculate the free cash flow to the firm (FCFF) and the free cash flow to equity (FCFE).

Answer reference: Section 3.2

The background of the page is an abstract digital design. It features a dark blue and black space filled with a dense pattern of glowing red and white binary digits (0s and 1s). These digits are arranged in a way that creates a sense of depth and perspective, as if they are receding into the distance. Overlaid on this pattern are numerous thin, glowing lines in shades of blue and white, which intersect and crisscross the space, further enhancing the digital and technological aesthetic.

Chapter Four

Group Accounting

1 Subsidiaries

2. Associates

This syllabus area will provide approximately 7 of the 40 examination questions



1. Subsidiaries

Introduction to Group Accounting

The ability to understand consolidated (or group) accounts is a fundamental skill for a corporate financier. This will enable careful consideration of how best to structure a proposed transaction and to assess the financial effects of a deal.

This chapter covers accounting for acquisitions, including subsidiaries, associates and joint ventures. We look in detail at the process of consolidation, including calculating non-controlling interest, goodwill, fair value adjustments and dealing with intra-group transactions and mid-year acquisitions.

Accounting for Investments

When a company buys shares in another company it is making an investment. The basic accounting treatment is outlined below:

Investments

When we invest, the impact on the financial statements is:

- Cash down (net assets down).
- Investment up (net assets up).

The investment is an asset, but what type?

Current Asset	Non-Current Asset
Definition Not a non-current asset investment, ie: • Speculative. • For the purpose of resale. Accounting treatment • In the statement of financial position at fair value if it is a financial instrument (eg, a right to receive cash or an investment in the equity shares of another company). • In the income statement: Dividends received = income.	Definition • Long term. • For continuing use in the business, not intended for resale. Accounting treatment • In the statement of financial position at fair value. • In the income statement: Dividends received = income.

The above treatment of current asset investments seems appropriate as it is very similar to that of holding a unit of inventory for resale. The question is whether or not this treatment is appropriate for different percentage levels of non-current asset investments.

It seems appropriate for very low levels of investment of, say, 1% or 2% of share capital of the company in which the investment is held. However, is it appropriate for higher levels of investment? Will this treatment give a fair presentation of the performance of a company and its position at the year end for significant levels of investment? We will answer this with a short exercise.

Example

A company (H) was formed ten years ago with the investment of £1,200 cash by the shareholders. Its balance sheet today is:

H's Statement of Financial Position	£
Net Assets	
Investment in S	1,000
Other Non-Current Assets	800
Current Assets	1,000
	2,800

Liabilities	(200)
	2,600
Shareholders' Funds	
Share Capital (£1 ordinary shares)	1,200
Retained Earnings	1,400
	2,600

The £1,000 investment on the balance sheet of H represents the cost of acquiring 100% of the shares in S, formed on the same day as H itself was set up. Neither H nor S has ever paid any dividends; hence, based on these accounts, the only return that H's investors are aware of being generated from their initial £1,200 investment is the £1,400 retained profit in the books of H.

However, if we are now told that the balance sheet of S is as follows, we see a different picture of how well the original £1,200 investment has been utilised.

S's Statement of Financial Position	(£)
Net Assets	
Non-Current Assets	50,000
Current Assets	120,000
	170,000
Liabilities	(20,000)
	150,000
Shareholders' Funds	
Share Capital (£1 ordinary shares)	1,000
Retained Earnings	149,000
	150,000

As we can see, of the original £1,200 invested in H, £1,000 was immediately invested in S and that £1,000 has managed to generate £149,000 profit over the intervening years. The £1,400 profit we see in H's books is the profit that has been generated on the remaining £200 of the initial capital invested.

S has never paid any dividends to H, its shareholder. However, since the directors of H control S through their 100% ownership of its shares, and the shareholders of H have effectively financed S, does simply showing S at a value of £1,000 in the books of H give a fair presentation of the state of affairs of H at that date?

Clearly H's shareholders need more information. One possibility might be to provide them with the financial statements of all companies controlled by H and a commentary explaining the implications. If H had many subsidiaries, this would lead to information overload and shareholders would find it impossible to interpret.

1.1 Group Accounts/Consolidated Accounts

4.1.1 Know the difference between group accounts and company accounts

The chosen option is to aggregate the financial statements of the parent company (also known as the holding company) with those of its subsidiaries into a single set of accounts referred to as either 'group' or '**consolidated accounts**'. Group accounts do not reflect the legal position, as the group is not a legal entity, but they present the commercial reality. Since the parent company's directors control the operating and financial policy decisions taken by subsidiaries there is, in commercial reality, a single business managed by the parent company's board. It follows that there should also be a single set of financial statements for this entity by applying the 'single entity' concept. Accountants believe that this approach is necessary if a fair presentation is to be given.

In the parent's individual accounts, the investment in the subsidiary will be shown as a simple investment regardless of the share of ownership. In group accounts, the substance of a 'single entity' of the parent and the subsidiaries that it controls is reflected.

So, where a company has subsidiaries, under the Companies Act (2006) it is required to prepare two sets of accounts for its shareholders as follows:

- individual company accounts of the parent company, and
- group accounts.

The parent company's accounts are relevant mainly for determining the maximum amount of dividend that the company can legally distribute (its distributable profits). The group accounts are used by investors and lenders for valuation, performance measurement and assessing risk.

1.1.1 What Are Group Accounts?

The individual financial statements of the parent and its subsidiaries are the starting point for the group accounts. However, these must be adjusted to remove the effects of transactions between them. These intra-group transactions typically include:

- loans between members of the group
- share capital of subsidiaries held by the parent
- purchase and sale of goods and/or services (including management charges), and
- interest and dividends paid and received within the group.

These transactions take place within the group and cannot be shown as assets, liabilities, income or expenditure in the group accounts that show that entity's relationship with the outside world. In effect, any transactions within the single entity need to be eliminated in the group accounts so that only third-party transactions are reflected.

1.2 Definitions in Group Accounting

4.1.2 Understand the meaning of the following in the context of a company group structure: parent; subsidiary; control; consolidated accounts; non-controlling interest (NCI)

Parent

A parent is an entity that controls one or more other entities (referred to as subsidiaries).

Subsidiary

A subsidiary is an entity that is controlled by another entity.

Control

Control is where the investor has the exposure, or rights, to variable returns from its involvement with its investee, alongside having the ability to affect those returns through its power over the investee.

Consolidated accounts

Consolidated financial statements are those of a group in which the assets, liabilities, equity, income and expenses and cash flows of the parent and its subsidiaries are presented as those of a single economic entity.

Non-controlling interest (NCI)

Equity in a subsidiary that is not attributable, directly or indirectly, to a parent.

1.3 The Consolidated Statement of Financial Position/Group Balance Sheet

4.1.3 Understand the treatment of the following in the preparation of a consolidated statement of financial position at acquisition: fair value adjustments for property, plant and equipment (PPE); fair value of cash and shares used as consideration for the acquisition; intra-group trading balances and unrealised profit from intra-group trading; acquisition of subsidiaries part way through the year

Users of the accounts do not see what adjustments have been made to eliminate intra-group transactions – they are only shown the results of the process. There are three steps in preparing group accounts where the parent owns 100% of the share capital of a subsidiary.

1. Eliminate intra-group transactions.
2. Aggregate remaining assets, liabilities, income and expenses.
3. Calculate group/consolidated retained earnings.

Where a subsidiary is partly owned, ie, the parent has control but does not own all the subsidiary's share capital, there is a fourth step.

4. Calculate non-controlling interest (NCI).

Continuing with the case where H owns 100% of the share capital of S and there are no non-controlling interests:

Example

This example shows how to consolidate a 100% owned subsidiary.

Statements of Financial Position	H (£)	S (£)
Net Assets		
Investment in S (100%)	1,000	
Other Non-Current Assets	800	50,000
Current Assets	1,000	120,000
	2,800	170,000
Liabilities	(200)	(20,000)
	2.600	150.000

	1,000	100,000
Shareholders' Funds		
Share Capital	1,200	1,000
Retained Earnings	1,400	149,000
	2,600	150,000

STEP 1 – Eliminate intra-group transactions

The investment asset in the balance sheet of H represents the cost (£1,000) of acquiring 100% of S's share capital on its formation ten years ago. At that date, S had no retained earnings as it had not yet started to trade.

H's asset is matched by 100% of S's share capital. Share capital is similar to a liability owed by the company to its shareholders although it is not usually expected to be repaid. From the point of view of H and S combined (the group), H cannot own shares in itself and S cannot owe obligations to itself. The adjustment to eliminate these items is:

Reduce investment in S £1,000

Reduce share capital of S £1,000

A similar adjustment would be made if H had lent money to S: neither H's loan asset (receivable) nor S's loan liability (payable) would be reported in the group balance sheet.

STEP 2 – Aggregate remaining assets and liabilities.

STEP 3 – Calculate group/consolidated retained earnings.

Group retained earnings are made up of the parent company's retained earnings plus the group's share of any increase generated in the retained earnings of each subsidiary since it joined the group. In this case, the group's share is 100% and all the retained earnings (£149,000) of the subsidiary have been generated since H acquired its interest ten years ago, because the acquisition was before S started to trade.

Group retained earnings:

H		£1,400
S	100% x £149,000	£149,000
		£150,400

Group balance sheet		(£)
Net Assets		
Other Non-Current Assets	(800 + 50,000)	50,800
Current Assets	(1,000 + 120,000)	121,000
Liabilities	(200 + 20,000)	(20,200)
		151,600
Shareholders' Funds		
Share Capital	(H only)	1,200
Retained Earnings	(1,400 + 149,000)	150,400
		151,600

In a group balance sheet, there is no asset 'investment in subsidiary'. It has been replaced by all of the subsidiary's assets and liabilities as if they were held by the parent itself. It therefore shows all of the assets and liabilities that are effectively under the control of the parent company's directors. The share capital that appears in a group balance sheet is always the share capital of the parent company and the reserves show what the parent's retained earnings would have been if it had earned the profits in its own accounts, rather than operating through a subsidiary company.

1.4 Non-Controlling Interest (NCI)

4.1.4 Be able to calculate the value of non-controlling interest (NCI)

We must distinguish between the control the parent has over the subsidiary, which is what requires consolidated accounts, and the ownership percentage that the parent has in the subsidiary's share capital.

Control is determined by a number of factors but basically requires a majority shareholding of more than 50%. Non-controlling interest represents the remaining ownership percentage that a parent company does not own.

Control requires consolidated accounts and because the parent has control over the subsidiary, 100% of the subsidiary's assets and liabilities, income and expenses are aggregated with those of the parent.

Ownership is reflected in the non-controlling interest (NCI) balance on the group statement of financial position.

Example

In the example above, it showed how the group balance sheet is generated where the parent company acquired 100% of the subsidiary's share capital for £1,000 on the formation of the subsidiary.

This exercise uses similar figures except for the fact that it is assumed that H acquired 70% of S's share capital at a cost of £700. Other investors contributed £300 for 30% of S's share capital. H's balance sheet therefore records the investment in the subsidiary at £700 and its net current assets will be £1,100, not £800, as it only spent £700 on buying shares in S.

Balance sheet	H (£)	S (£)
Net Assets		
Investment in S (70%)	700	
Other Non-current Assets	800	50,000
Net Current Assets	1,100	100,000
	2,600	150,000
Shareholders' Funds		
Share Capital	1,200	1,000
Retained Earnings	1,400	149,000
	2,600	150,000

STEP 1 – Eliminate intra-group transactions

Reduce investment in S by £700

Reduce share capital of S by £700

STEP 2 – Aggregate remaining assets and liabilities.

An important principle of consolidation is that 100% of a subsidiary's assets and liabilities (£50,000 and £100,000) are reported in the group balance sheet, even when, as is the case here, the parent does not own all the share capital of the subsidiary. The reason for this is that the group balance sheet must show

all the assets and liabilities over which the parent company's directors exercise control: whether H owns 100%, 70% or 51% of S's share capital, it is still able to direct the financial and operating policy decisions of S because it only needs a simple majority (more than 50%) of voting power to appoint and remove directors to/from the board of S. The group balance sheet will report all the assets and liabilities of S with H's own and then show how much of S's net assets/ shareholders' funds are financed by the NCI shareholders in S.

We now need to look further at how to calculate NCI so that we can complete the group balance sheet when ownership is not 100%.

1.4.1 Calculation of NCI

Where a parent company does not own all of the shares of the subsidiary but still controls it, the total assets and liabilities of the subsidiary are included in the consolidated balance sheet. This is despite the fact that, effectively, a proportion of the net assets of such subsidiaries belongs to investors from outside the group (non-controlling interests).

The net assets of a company are financed by share capital and retained earnings. The consolidation procedure for dealing with partly owned subsidiaries is to calculate the proportion of ordinary shares, preference shares and retained earnings attributable to non-controlling interests.

Example

P has owned 75% of the share capital of S since the date of S's incorporation. Their latest balance sheets are given below:

P Statement of Financial Position	£	£
Net Assets		
Non-Current Assets		
Property, plant and equipment	50,000	
30,000 £1 ordinary shares in S at cost	30,000	
		80,000
Current Assets		45,000
Current Liabilities		(20,000)
		105,000

Shareholders' Funds		
Equity		
80,000 £1 ordinary shares	80,000	
Retained Earnings	25,000	
		105,000

S Statement of Financial Position	£	£
Net Assets		
Property, plant and equipment		35,000
Current Assets		35,000
Current Liabilities		(20,000)
		50,000
Shareholders' Funds		
40,000 £1 ordinary shares	40,000	
Retained Earnings	10,000	
		50,000

Requirement

Prepare the consolidated balance sheet.

Solution

All of S's net assets are consolidated despite the fact that the company is only 75% owned because P controls S.

Non-Controlling Interest Balance for the Group Balance Sheet	(£)
NCI share of share capital (25% x £40,000)	10,000
NCI share of retained earnings (25% x £10,000)	2,500
	12,500

P Group Consolidated Balance sheet	£	£
Net Assets		
Non-Current Assets (50,000 + 35,000)		85,000
Current Assets (45,000 + 35,000)		80,000
Current Liabilities (20,000 + 20,000)		(40,000)
		125,000
Shareholders' Funds		
Share Capital (P only)	80,000	
Retained Earnings (25,000 + (75% x £10,000))	32,500	
		112,500
Non-controlling Interest		12,500
		125,000

It is permissible to measure NCI at its fair value rather than its share of net assets. This is allowed by IFRS 3 – Business Combinations – on an acquisition-by-acquisition basis. The fair value could be on the basis of a quoted market price of the subsidiary's shares.

The non-controlling interest on the balance sheet is calculated as the fair value of the non-controlling interest on acquisition of the subsidiary plus the non-controlling interest's share of post-acquisition profits.

For simplicity, this workbook focuses on non-controlling interest being measured at its share of the subsidiary's net assets.

1.5 Goodwill Arising on Consolidation

4.1.5 Be able to calculate goodwill arising on consolidation

In the exercises we have looked at so far, the cost of shares acquired by the parent company has always been equal to the par value of those shares. This is seldom the case in practice, and we must now consider some more complicated examples.

To begin with, we will examine the entries made by the parent company in its own balance sheet when it acquires shares.

When a company wishes to purchase shares in another company, it must pay the previous owners of those shares. The most obvious form of payment would be in cash. Suppose company P purchases all 40,000 £1 shares in company S and pays £60,000 cash to the previous shareholders as consideration. The entries in P's books would be:

Statement of Financial Position	(£)
Investment in S at cost	60,000
Cash down	60,000

However, the previous shareholders might be prepared to accept some other form of consideration. For example, they might accept an agreed number of shares in P. P would then issue new shares in the agreed number and allot them to the former shareholders of S. This kind of deal might be attractive to P since it avoids the need for a heavy cash outlay. The former shareholders of S would retain an indirect interest in that company's profitability via their new holding in its parent company.

Suppose the shareholders of S agreed to accept one £1 ordinary share in P for every two £1 ordinary shares in S. P would then need to issue and allot 20,000 new £1 shares. How would this transaction be recorded in the books of P?

The simplest method would be as follows:

Statement of Financial Position	(£)
Investment in S up	20,000
Share capital up	20,000

However, if the 40,000 £1 shares acquired in S have a value of £60,000 this would be misleading. The former shareholders of S have presumably agreed to accept 20,000 shares in P because they consider each of those shares to have a value of £3. This view of the matter suggests the following method of recording the transaction in P's books.

Statement of Financial Position	(£)
Investment in S up	60,000
Share capital up	20,000
Share premium account up	40,000

This second method is the one which should normally be used in preparing consolidated accounts.

1.5.1 Calculating Goodwill on Consolidation

The amount which P records in its books as the cost of its investment in S may be more or less than the book value of the assets it acquires. Suppose that S in the previous example has no retained earnings and no liabilities so that its share capital of £40,000 is balanced by tangible assets with a book value of £40,000. For simplicity, assume that the book value of S's assets is the same as their market or fair value.

Now when the directors of P agree to pay £60,000 for a 100% investment in S they must believe that S must be worth £20,000 more than the fair value of its tangible assets of £40,000. This amount of £20,000 paid over and above the value of the tangible assets acquired is called goodwill arising on consolidation (also sometimes called premium on acquisition).

Following the normal cancellation procedure the £40,000 share capital in S's balance sheet could be cancelled against £40,000 of the 'investment in S' in the balance sheet of P. This would leave £20,000 uncanceled in the parent company's accounts and this £20,000 would appear in the consolidated balance sheet under the caption 'Intangible non-current assets: goodwill arising on consolidation'.

1.5.2 Goodwill and Pre-Acquisition Profits

Up to now we have assumed that S did not have any retained earnings when its shares were purchased by P. Assuming instead that S had earned profits of £8,000 in the period before acquisition, its balance sheet just before the purchase would look as follows:

Accounting equation impact	(£)
Net Assets	48,000
Share Capital	40,000
Retained Earnings	8,000
	48,000

If P now purchases all the shares in S, it will acquire total net assets worth £48,000 at a cost of £60,000. In this case the goodwill is £12,000. It should be apparent that any retained earnings earned by the subsidiary prior to its acquisition by the parent company must be incorporated in the cancellation process to arrive at a figure for goodwill arising on consolidation. In other words, not only S's share capital, but also its pre-acquisition retained earnings, must be cancelled against the asset 'investment in S' in the accounts of the parent company. The uncanceled balance of £12,000 appears in the consolidated balance sheet as goodwill.

The consequence of this is that any pre-acquisition retained earnings of a subsidiary company are not aggregated with the parent company's retained earnings in the consolidated balance sheet. The figure of consolidated retained earnings comprises the retained earnings of the parent company plus the post-acquisition retained earnings only of subsidiary companies. The post-acquisition retained earnings are simply retained earnings now less retained earnings at acquisition.

Example

Sing Co. acquired the ordinary shares of Wing Co. on 31 March when the draft balance sheets of each company were as follows:

Sing Co. Statement of Financial Position as at 31 March	(£)
Net Assets	
Non-current Assets	
Investment in 50,000 shares in Wing Co. at cost	80,000
Current Assets	40,000

	120,000
Shareholders' Funds	
Ordinary Shares	75,000
Retained Earnings	45,000
	120,000

Wing Co. Statement of Financial Position as at 31 March	(£)
Net Assets	60,000
50,000 ordinary shares of £1 each	50,000
Retained Earnings	10,000
	60,000

Requirement

Prepare the consolidated balance sheet as at 31 March.

Solution

The technique to adopt here is to produce a new working: 'Goodwill'.

Goodwill	(£)	(£)
Cost of investment		X
Share of net assets acquired as represented by:		
Ordinary share capital	X	
Share premium	X	
Retained earnings on acquisition	X	
Group share (% acquired)		(X)
Goodwill		X

Applying this to the example, the workings will look like this:

	(£)	(£)
Cost of investment		80,000
Share of net assets acquired as represented by:		
Ordinary share capital	50,000	
Retained earnings on acquisition	10,000	
	60,000	
Group share 100%		(60,000)
Goodwill		20,000

Sing Co Consolidated Statement of Financial Position as at 31 March	(£)
Net Assets	
Non-Current Assets: Goodwill arising on consolidation	20,000
Current Assets (40,000 + 60,000)	100,000
	120,000
Shareholders' Funds	
Ordinary Shares (Sing Co only)	75,000
Retained Earnings (Sing Co only – no post-acquisition retained earnings in Wing Co)	45,000
	120,000

1.5.3 IFRS 3 and Fair Values in Acquisition Accounting

Fair values are very important in calculating goodwill.

The reported balance sheet of a subsidiary company at the date it is acquired may not be a guide to the fair value of its net assets. For example, the market value of a freehold building may have risen greatly since it was acquired, but it may appear in the balance sheet at historical cost less accumulated depreciation.

Fair value is defined as follows by IFRS 3 and various other Standards – it is an important definition: The amount for which an asset could be exchanged, a liability settled, or an equity instrument granted could be exchanged, between knowledgeable, willing parties in an arm's length transaction.

1.5.4 Fair Value Adjustments for Property, Plant and Equipment (PPE)

Until now we have calculated goodwill as the difference between the cost of the investment and the book value of net assets acquired by the group. If this calculation is to comply with the definition above we must ensure that the book value of the subsidiary's net assets is the same as their fair value.

Example

P acquired 75% of the ordinary shares of S last year. At that date, the fair value of S's non-current assets was £23,000 greater than their net book value, and the balance of retained earnings was £21,000. The balance sheets of both companies at the current year end are given below. S has not incorporated any revaluation in its books of account. The fair value adjustment to S's non-current assets would have resulted in an additional £3,000 of depreciation if it had been incorporated into the accounts.

S Statement of Financial Position	(£)
Net Assets	
Non-Current Assets: Property, plant and equipment	28,000
Current Assets	43,000
Current Liabilities	(10,000)
	61,000
Shareholders' Funds	
Ordinary shares of £1 each	20,000
Retained Earnings	41,000
	61,000

Requirement

Prepare P's consolidated balance sheet at the year end.

Solution

S has not incorporated the revaluation in its draft balance sheet. Before beginning the consolidation workings we must therefore adjust the company's balance of profits at the date of acquisition and at the balance sheet date.

y	(£)	(£)
Retained earnings on acquisition		21,000
Consolidation adjustment: revaluation surplus		23,000
Pre-acquisition retained earnings for consolidation purposes		44,000
Profit for year		
Per draft accounts (£41,000 – 21,000)	20,000	
Consolidation adjustment: increase in depreciation charge	(3,000)	
		17,000
Adjusted balance of retained earnings at the year end		61,000

In the consolidated balance sheet, S's non-current assets will appear at their revalued amount: (£28,000 + 23,000 – 3,000) = £48,000. The consolidation workings can now be drawn up.

Workings

1. Non-Controlling Interest

Non-Controlling Interest	(£)
Share capital (25% x £20,000)	5,000
Retained earnings (25% x £61,000)	15,250
	20,250

2. Goodwill

Goodwill	(£)	(£)
Cost of investment		51,000
Share of net assets acquired as represented by		
Ordinary share capital	20,000	
Retained earnings	21,000	
Fair value adjustment	23,000	
	64,000	
Group share (75%)		48,000
Goodwill		3,000

3. Retained Earnings

Retained Earnings	P (£)	S (£)
Per question	96,000	41,000
Pre-acquisition retained earnings		(21,000)
Depreciation adjustment		(3,000)
Post-acquisition S		17,000
Group share in S (£17,000 × 75%)	12,750	
Group retained earnings	108,750	

Consolidated Balance Sheet

P Consolidated Statement of Financial Position at the Year End	(£)	(£)
Net Assets		
Non-Current Assets: PPE (63,000 + 48,000)	111,000	
Goodwill (W2)	3,000	
		114,000
Current Assets (82,000 + 43,000)		125,000
Current Liabilities (20,000 + 10,000)		(30,000)
		209,000
Shareholders' Funds		
Ordinary shares of £1 each	80,000	
Retained Earnings (W3)	108,750	
		188,750
Non-controlling Interest (W1)		20,250
		209,000

1.5.5 Fair Value of Cash and Shares Used as Consideration for the Acquisition

Fair values in IFRS 3 are not limited to the subsidiary's assets, they also apply to the consideration paid for the shares in the subsidiary.

If cash is paid, the value is straightforward. Cash may be paid in the future, in which case it should be reflected at its present value, if materially different.

If shares are paid, now or deferred to a future date, the market value of the shares on the acquisition date should be used.

If shares will be transferred to the subsidiary's former shareholders in the future but only if certain conditions are met, such as meeting revenue targets, the fair value of this contingent consideration should be used.

1.6 IFRS 3 Rules for Goodwill

4.1.6 Know the requirements for reviewing goodwill under IFRS 3

Goodwill arising on consolidation is one form of purchased goodwill, and is governed by IFRS 3. IFRS 3 requires that goodwill arising on consolidation should be capitalised in the consolidated balance sheet and reviewed for impairment every year.

1.6.1 Negative Goodwill

Goodwill arising on consolidation is the difference between the cost of an acquisition and the value of the subsidiary's net assets acquired. This difference can be negative: ie, the aggregate of the fair values of the separable net assets acquired may exceed what the parent company paid for them.

In the treatment of this 'negative goodwill' or bargain purchase:

- an entity should first re-assess the amounts at which it has measured both the cost of the combination and the acquiree's identifiable net assets – this exercise should identify any errors, and
- recognise any negative goodwill remaining immediately in the income statement.

1.6.2 Annual Impairment Review

Goodwill in a **business combination** (acquisition) must be tested annually for impairment in accordance with IAS 36 – Impairment of Assets. This means that the carrying amount in the group balance sheet must be compared to its recoverable amount.

1.7 Consolidation Adjustments

4.1.3 Understand the treatment of the following in the preparation of a consolidated statement of financial position at acquisition: fair value adjustments for property, plant and equipment (PPE); fair value of cash and shares used as consideration for the acquisition; intra-group trading balances and unrealised profit from intra-group trading; acquisition of subsidiaries part way through the year

We have already seen that consolidation adjustments are needed to make sure that the group balance sheet reflects the single entity concept for the group.

These include intra-group trading adjustments for outstanding balances (payables in one group company and receivables in another) and potentially for unrealised profits if the goods are still held in the group at year end.

Acquisitions of a subsidiary part way through the year are straightforward for the group balance sheet because the subsidiary's pre-acquisition retained earnings are dealt with in the goodwill calculation and group retained earnings must include only the subsidiary's post-acquisition retained earnings.

Fair values in relation to goodwill have already been covered.

1.7.1 Unrealised Profit

Any receivable/payable balances outstanding between the companies are cancelled on consolidation.

No further problem arises if all such intra-group transactions are undertaken at cost without any mark up for profit.

However, each company in a group is a separate trading entity and may wish to treat other group companies in the same way as any other customer. In this case, one group company (A) may buy goods at one price and sell them at a higher price to another group company (B). The accounts of A will quite properly include the profit earned on sales to B, and similarly, B's balance sheet will include inventories at their cost to B, ie, at the amount at which they were purchased from A.

This gives rise to two problems.

- Although A makes a profit as soon as it sells goods to B, the group does not make a sale or achieve a profit until an outside customer buys the goods from B.
- Any purchases from A which remain unsold by B at the year end will be included in B's inventory. Their balance sheet value will be their cost to B, which is not the same as their cost to the group.

The objective of consolidated accounts is to present the financial position of several connected companies as that of a single entity, the group. This means that in a consolidated balance sheet, the only profits recognised should be those earned by the group in providing goods or services to outsiders; and similarly, inventory in the consolidated balance sheet should be valued at cost to the group.

Example

Suppose that a holding company P buys goods for £1,600 and sells them to a wholly-owned subsidiary S for £2,000. The goods are in S's inventory at the year end and appear in S's balance sheet at £2,000. In this case, P will record a profit of £400 in its individual accounts, but from the group's point of view the figures are:

Cost	£1,600
External sales	nil
Closing inventory at cost	£1,600
Profit/loss	nil

If we add together the figures for retained earnings and inventory in the individual balance sheets of P and S the resulting figures for consolidated retained earnings and consolidated inventory will each be overstated by £400.

A consolidation adjustment is therefore necessary:

Impact
Group reserves down by £400
Group inventory (balance sheet) down by £400

The £400 is the amount of **profit unrealised** by the group.

Example

P acquired all the shares in S one year ago when the reserves of S stood at £10,000. Draft balance sheets for each company are as follows:

	P		S	
	(£)	(£)	(£)	(£)
Net Assets				
Non-Current Assets				
Property, plant and equipment	80,000			40,000
Investment in S at cost	46,000			
		126,000		
Current Assets		40,000		30,000
Current Liabilities		(21,000)		(18,000)
		145,000		52,000
Shareholders' Funds				
Ordinary shares of £1 each		100,000		30,000
Reserves		45,000		22,000
		145,000		52,000

During the year P sold goods to S for £50,000, the profit to P being 20% of selling price. At the balance sheet date, £15,000 of these goods remained unsold in the inventories of S. At the same date, P owed S Co £12,000 for transactions between the companies reflected in the trade payables of P Co and the receivables of S. The goodwill arising on consolidation has been impaired. The amount of the impairment is £1,500.

Requirement

Prepare a draft consolidated balance sheet for P.

Solution

1. Goodwill

	(£)	(£)
Cost of investment		46,000
Share of net assets acquired as represented by		
Share capital	30,000	
Retained earnings	10,000	
	40,000	
Group share (100%)		40,000
Goodwill		6,000
Less: impairment loss		(1,500)
		4,500

2. Retained Earnings

	P	S
	(£)	(£)
Retained earnings per question	45,000	22,000
Unrealised profit: 20% x £15,000	(3,000)	
	42,000	
Pre-acquisition retained earnings		(10,000)
		12,000
Share of S (post-acquisition)	12,000	
Goodwill impairment loss	(1,500)	
	52,500	

P Consolidated Statement of Financial Position	(£)	(£)
Net Assets		
Non-Current Assets		
Property, plant and equipment (80,000 + 40,000)	120,000	
Goodwill (6,000 – 1,500)	4,500	
		124,500
Current Assets (W1)		55,000
Current Liabilities (W2)		(27,000)
		152,500
Shareholders' Funds		
Ordinary Shares of £1 each	100,000	
Retained Earnings	52,500	
		152,500

Workings

1. Current Assets

	(£)	(£)
In P's balance sheet		40,000
In S's balance sheet	30,000	
Less S's current account with P cancelled	12,000	
		18,000
		58,000
Less unrealised profit excluded from inventory valuation		3,000
		55,000

2. Current Liabilities

	(£)
In P's balance sheet	21,000
Less P's current account with S Co cancelled	12,000
	9,000
In S's balance sheet	18,000
	27,000

1.8 The Consolidated Income Statement

4.1.7 Understand the treatment of the following in the preparation of a consolidated income statement at acquisition: intra-group trading balances and unrealised profit from intra-group trading; acquisition of subsidiaries part way through the year

The individual income statements are set out side by side and summed up to form the basis of the consolidated income statement. This is illustrated in the example below:

Example

P acquired 75% of the ordinary shares of S on that company's incorporation several years ago. The summarised income statements of the two companies for the current year are set out below.

	P	S
	(£)	(£)
Sales revenue	75,000	38,000
Cost of sales	30,000	20,000
Gross profit	45,000	18,000
Administrative expenses	14,000	8,000
Profit before tax	31,000	10,000
Tax	10,000	2,000
Profit for the year	21,000	8,000
Retained earnings brought forward	87,000	17,000
Retained earnings carried forward	108,000	25,000

Requirement

Prepare the consolidated income statement and movement in retained earnings.

Solution

P Consolidated Income Statement for the Year	(£)
Sales revenue (75 + 38)	113,000
Cost of sales (30 + 20)	50,000
Gross profit	63,000
Administrative expenses (14 + 8)	22,000
Profit before tax	41,000
Tax (10 + 2)	12,000
Profit after tax	29,000
Non-controlling interest (25% x £8,000)	2,000
Group profit for the year	27,000
Retained earnings brought forward	
(Group share only: 87 + (17 x 75%))	99,750
Retained earnings carried forward	126,750

Note how non-controlling interest is dealt with:

- Down to the line 'profit after taxation' the whole of S's results are included without reference to group share or non-controlling share. A one-line adjustment is then inserted to deduct the NCI share of S's profit after taxation.
- The NCI share of £4,250 (25% x 17,000) of S's retained earnings brought forward is excluded. This means that the carried forward figure of £126,750 is the figure which would appear in the balance sheet as group retained earnings.

This last point may be clearer if we revert to our balance sheet technique and construct the working for group retained earnings.

	(£)
Group reserves	
P	108,000
Share of S's post-acquisition retained reserves (75% x £25,000)	18,750
	126,750

Notice that a consolidated income statement links up with a consolidated balance sheet exactly as in the case of an individual company's accounts: the figure of retained earnings carried forward at the bottom of the income statement appears as the figure for retained earnings in the balance sheet. (Note. Under IAS 1 – Presentation of Financial Statements, this would be shown as a movement in retained earnings in the statement of changes in equity; for convenience the retained earnings movements are shown here with the income statement.)

We will now look at the complications for the consolidated income statement introduced by inter-company trading and mid-year acquisition of the subsidiary.

1.8.1 Intra-Group Trading

Like the consolidated balance sheet, the consolidated income statement should deal with the results of the group as those of a single entity. When one company in a group sells goods to another an identical amount is added to the sales revenue of the first company and to the cost of sales of the second. Yet as far as the entity's dealings with outsiders are concerned, no sale has taken place.

The consolidated figures for sales revenue and cost of sales should represent sales to, and purchases from, parties outside the group. An adjustment is therefore necessary to reduce the sales revenue and cost of sales figures by the value of intra-group sales during the year.

We have also seen in section 1.7.1 that any unrealised profits on intra-group trading should be excluded from the figure for group profits. This will occur whenever goods sold at a profit within the group remain in the inventory of the purchasing company at the year end. The best way to deal with this is to calculate the unrealised profit on unsold inventories at the year end and reduce consolidated gross profit by this amount. Cost of sales will be the balancing figure.

Example

Suppose in our earlier exercise that S had recorded sales of £5,000 to P during the year. S had purchased these goods from outside suppliers at a cost of £3,000. One half of the goods remained in P's inventory at the year end. Prepare the revised consolidated income statement.

Solution

The consolidated income statement for the year ended 31 December would now be as follows:

	(£)
Sales revenue ($75 + 38 - 5$)	108,000
Cost of sales (balancing figure) or ($30 + 20 - 5 + 1$)	(46,000)
Gross profit ($45 + 18 - 1^*$)	62,000
Administrative expenses	(22,000)
Profit before tax	40,000
Tax	(12,000)
Profit after tax	28,000
Non-controlling interest ($25\% \times (£8,000 - £1,000^*)$)	(1,750)
Group profit for the year	26,250
Retained earnings brought forward	99,750
Retained earnings carried forward	126,000
*Unrealised profit: $\frac{1}{2} \times (£5,000 - £3,000)$	1,000

An adjustment will be made for the unrealised profit against the inventory figure in the consolidated balance sheet, as explained earlier in the chapter.

1.8.2 Accounting for a Mid-Year Acquisition

The figure for retained earnings at the bottom of the consolidated income statement must be the same as the figure for retained earnings in the consolidated balance sheet. We have seen earlier in this chapter that retained earnings in the consolidated balance sheet comprises:

- The whole of the parent company's retained earnings.
- A proportion of the subsidiary company's retained earnings. The proportion is the group's share of post-acquisition retained earnings in the subsidiary. From the total retained earnings of the subsidiary, we must therefore exclude both the NCI share of total retained earnings and the group's share of pre-acquisition retained earnings.

A similar procedure is necessary in the consolidated income statement if it is to link up with the consolidated balance sheet. Previous exercises have shown how the NCI share of profits is excluded in the income statement. Their share of profits for the year is deducted from profit after tax, while the figure for profits consolidated includes only the group's proportion of the subsidiary's post-acquisition profits.

In the same way, if the subsidiary is acquired during the accounting year, it is therefore necessary to apportion its profit for the year between pre-acquisition and post-acquisition elements.

Example

P acquired 60% of the equity of S on 1 April. The income statements of the two companies for the year ended 31 December are set out below along with the post-acquisition income of S.

	P	S	Post-acqn of S (9/12)
	(£)	(£)	(£)
Sales Revenue	170,000	80,000	60,000
Cost of Sales	65,000	36,000	27,000
Gross Profit	105,000	44,000	33,000
Administrative Expenses	43,000	12,000	9,000
Profit before tax	62,000	32,000	24,000
Tax	23,000	8,000	6,000
Profit after tax	39,000	24,000	18,000
Dividends (paid 31 December)	12,000	6,000	

Retained Earnings brought forward	81,000	40,000	
Retained Earnings carried forward	108,000	58,000	

P has not yet accounted for the dividends received from S.

Requirement

Prepare the consolidated income statement and movements in retained earnings.

Solution

The shares in S were acquired three months into the year. Only the post-acquisition proportion (9/12) of S's income statement is included in the consolidated income statement. This is shown above for convenience.

P Consolidated Income Statement for the Year Ended 31 December	(£)
Sales Revenue (170 + 60)	230,000
Cost of Sales (65 + 27)	92,000
Gross Profit	138,000
Administrative Expenses (43 + 9)	52,000
Profit before tax	86,000
Tax (23 + 6)	29,000
Profit after tax	57,000
Non-Controlling Interest (40% x £18,000)	7,200
Group Profit for the year	49,800
Retained Earnings brought forward*	81,000
Profit for the year	49,800

Dividends	(12,000)
Retained earnings carried forward	118,800

*All of S's profits brought forward are pre-acquisition.

2. Associates

At the start of this chapter, we discussed how an investment in another company would be measured. In the parent's individual accounts, the investment in shares is shown as a non-current or current asset under IFRS 9 – Financial Instruments.

If the parent controls the investee, a parent-subsidary relationship arises and consolidated accounts are prepared.

A parent may invest in another company and not gain control with more than 50% of voting rights but may have **significant influence**. This creates a parent-associate relationship. This does not require consolidation in the same way as a subsidiary, but there are special accounting rules for associates and joint ventures where there is common control.

2.1 Definitions

4.2.1 Understand the meaning of significant influence and joint control

- **Associate** – an entity over which the investor has significant influence but not control.
- **Significant influence** – the power to participate in the financial and operating policy decisions of the investee but without control or **joint control** over those policies.
- **Joint control** – contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.
- **Equity method** – a method of accounting whereby the investment is initially recorded at cost and adjusted thereafter for the post-acquisition change in the investor's share of investee's net assets. The investor's profit or loss includes its share of the investee's income statement.

2.2 IAS 28 Accounting for Associates

4.2.2 Know the characteristics of a parent-associate relationship

IAS 28 – Investment in Associates and Joint Ventures is the accounting standard that provides rules about accounting for associates and joint ventures.

IAS 28 requires all investments in associates to be accounted for in the consolidated accounts using the equity method, unless the investment is classified as 'held for sale' in accordance with IFRS 5 (Non-current assets held for sale and discontinued operations), in which case it should be accounted for under IFRS 5.

The use of the equity method should be discontinued from the date that the investor ceases to have significant influence.

From that date, the investor shall account for the investment in accordance with IFRS 9 Financial Instruments. The carrying amount of the investment at the date that it ceases to be an associate shall be regarded as its cost on initial measurement as a financial asset under IFRS 9.

2.3 Equity Method of Accounting for Associates

4.2.3 Understand the equity method of accounting for associates

The single entity concept is not applied to an associate, therefore, many of the procedures required to apply the equity method are not the same as those required for full consolidation. However, intra-group unrealised profits must be excluded to the extent of the investor's share.

2.3.1 Consolidated Income Statement – With an Associate

The basic principle is that the investing company (P) should take account of its share of the earnings of the associate (A), whether or not (A) distributes the earnings as dividends. P achieves this by including a line in the consolidated income statement called 'share of profit of associate'.

Under equity accounting, the associated company's sales revenue, cost of sales and so on are not amalgamated with those of the group. Instead, the group share of the associate's profit after tax is included as a single line in the group income statement.

Example Consolidated Income Statement

The following is a suggested layout for the consolidated income statement for a company having subsidiaries as well as associated companies.

	(\$'000)
Revenue	1,400
Cost of Sales	770
Gross Profit	630
Distribution Costs and Administrative Expenses	290
	340
Share of Profit of Associates	17
Operating Profit/Profit before Interest and Taxation	357
Finance Income	30
	387
Finance Costs	20
Profit before Taxation	367
Tax	145
Profit for the Year	222
Attributable to:	
Equity Holders of the Parent	200
Non-controlling Interest	22
	222

2.3.2 Consolidated Statement of Financial Position – With an Associate

A single figure for 'Investment in Associate' is shown in the consolidated balance sheet just before current assets. At the time of the acquisition this is stated at cost. This amount will increase (decrease) each year by the amount of the group's share of the associate's profit (loss) for the year. On a cumulative basis, the investment in the associate is calculated as the initial investment plus (minus) % share of profits/(losses) due, less % share of dividends received.

Example

P, a company with subsidiaries, acquires 25,000 of the 100,000 £1 ordinary shares in A for £60,000 on 1 January. In the year to 31 December, A earns profits after tax of £24,000, from which it pays a dividend of £6,000.

How will A's results be accounted for in the individual and consolidated accounts of P for the year ended 31 December?

Solution

In the individual accounts of P, the investment will be recorded on 1 January at fair value and will be measured in accordance with IFRS 9. The only entry in P's individual income statement will be to record dividends received. For the year ended 31 December, P will be:

Accounting Entry	(£)
Cash up (25% x £6,000 dividend)	1,500
Retained Earnings – income up	1,500

Consolidated Statement of Financial Position as at 31 December (extract)	(£)
Non-current assets	
Investment in associate	
Cost	75,000
Group share of post acquisition retained profits	
(30% x £18,000)	5,400
	80,400

In the consolidated accounts of P, equity accounting principles will be used to account for the investment in A. Consolidated profit after tax will include the group's share of A's profit after tax ($25\% \times £24,000 = £6,000$). To the extent that this has been distributed as dividend, it is already included in P's individual accounts and will automatically be brought into the consolidated results. That part of the group's profit share which has not been distributed as dividend (£4,500) will be brought into consolidation by the following adjustment.

Accounting Entry	(£)
Investment in associates up	4,500
Retained Profits – income from shares in associates up	4,500

The asset 'Investment in associates' is then stated at £64,500, being cost plus the group share of post-acquisition retained profits.

Example

On 1 January, the net tangible assets of A amount to £220,000, financed by 100,000 £1 ordinary shares and revenue reserves of £120,000. P, a company with subsidiaries, acquires 30,000 of the shares in A for £75,000. During the year ended 31 December, A's profit after tax is £30,000, from which dividends of £12,000 are paid.

Show how P's investment in A would appear in the consolidated balance sheet at 31 December.

Solution

Consolidated Statement of Financial Position as at 31 December (extract)	(£)
Non-current assets	
Investment in associate	
Cost	75,000
Group share of post-acquisition retained profits	
($30\% \times £18,000$)	5,400
	80,400

An important point to note is that this figure of £80,400 can be arrived at in a completely different way. It is the sum of:

- a. The group's share of A's net assets at 31 December, and
- b. the premium paid over fair value for the shares acquired.

This can be shown as follows:

	(£)	(£)
a. A's net assets at 31 December		
Net assets at 1 January	220,000	
Retained profit for year	18,000	
Net assets at 31 December	238,000	
Group share (30%)		71,400
b. Premium on acquisition		
Net assets acquired by group on 1 Jan (30% x £220,000)	66,000	
Price paid for shares	75,000	
Premium on acquisition		9,000
Investment in associated company per balance sheet		80,400

2.3.3 Investments in Joint Ventures

If the joint venture parties have a right to a share of the outcome of the activities of a jointly controlled entity, their net interest in the arrangement would be accounted for under the equity method.

2.3.4 Analysis Points

Equity accounting for associates and joint ventures involves a one-line inclusion that provides very little information about the assets or profits of the associate or joint venture.

In the balance sheet, the one-line approach gives no indication of the breakdown of the assets and liabilities. It is quite conceivable that the associate or joint venture could be in a desperate liquidity or gearing position but this would not be revealed in the group financial statements.

The treatment in the income statement is very similar in that the group share of the associate's or joint venture's profit after tax is shown separately from group amounts. This provides very little breakdown of how the profit has been generated by the associate or joint venture.

Example

Set out below are the draft accounts of Parent Co and its subsidiaries and of Associate Co. Parent Co acquired 40% of the equity capital of Associate Co three years ago when the latter's reserves stood at £40,000.

Summarised Balance Sheets	Parent Co & Subsidiaries (£'000)	Associate Co (£'000)
Tangible non-current assets	220	170
Investment in associate, at cost	60	–
Loan to associate	20	–
Current assets	100	50
Loan from parent	–	(20)
	400	200
Share capital (£1 shares)	250	100
Reserves	150	100
	400	200
Operating profit	95	80
Tax	35	30
	60	50

You are required to prepare the summarised consolidated accounts of Parent Co.

Notes:

1. Assume that the associate's assets/liabilities are stated at fair value.
2. Assume that there are no non-controlling interests in the subsidiary companies.

Solution

Parent Co Consolidated Income Statement	(£'000)
Net profit	95
Share of profit of associated company ($50 \times 40\%$)	20
Profit before tax	105
Tax	35
Profit attributable to the members of Parent Co	80

Parent Co Consolidated Statement of Financial Position	(£'000)
Assets	
Tangible non-current assets	220
Investment in associate (see note)	104
Current assets	100
Total assets	424
Equity and Liabilities	
Share capital	250
Reserves (W1)	174
Total equity and liabilities	424

Note	(£'000)
Investment in associate	
Group's share of net assets (40% x 200)	80
Premium on acquisition (W2)	4
	84
Loan to associate	20
	104

Workings

1. Group reserves

	Parent & subsidiaries (£'000)	Associate (£'000)
Per question	150	100
Pre-acquisition		40
Post-acquisition		60
Group share in associate (£60 x 40%)	24	
Group reserves	174	

2. Premium on acquisition of associate

	(£'000)
Share capital	100
Reserves at date of acquisition	40
	140
Net assets acquired (40% x 140)	56
Cost	60
Premium on acquisition	4

End of Chapter Questions

Think of an answer for each question and refer to the appropriate section for confirmation.

1. Company A purchases 65% of the share capital of Company B for £34 million. It intends to hold the investment for the long-term. How should Company A recognise the purchase of shares in its individual financial statements?

Answer reference: Section 1

2. In terms of group accounting, what is the difference between an investment in another company that gives more than 50% voting rights in the investee company; and an investment in another company that gives 40% voting rights in the investee company?

Answer reference: Section 1.2 and 2.1

3. When preparing the consolidated statement of financial position, you are provided with the following balances.

Current assets	Parent (£)	Subsidiary (65% owned)
Inventory	12,000	7,600
Receivables	8,400	8,900
Cash	3,200	4,780
Total	23,600	21,280

At year end, the parent owes £500 to the subsidiary for goods purchased just before year end.

What is the figure for current assets in the consolidated statement of financial position?

Answer reference: Section 1.3

4. On 1 January 20X3, Company C purchased 80% of the share capital of Company D for £120,000 when Company D had share capital of £50,000 and retained earnings at acquisition of £83,000.

At the year-end date of 31 December 20X7, Company D's share capital remains unchanged and its retained earnings have increased to £234,000.

Calculate the non-controlling interest figure for the consolidated statement of financial position at 31 December 20X7.

Answer reference: Section 1.4

5. On 1 June 20X4, Company E purchased 75% of the share capital of Company F for £20 million. On that date, Company F had total share capital of £5 million and retained earnings of £10 million. Company F owns property with a market value £3 million higher than its book value. No revaluation is recognised in Company F's own accounts.

Calculate the value of goodwill on the acquisition of Company F.

Answer reference: Section 1.5

6. On 1 January 20X5, Company G purchased 80% of the share capital of Company H for £350,000 in cash and 20,000 shares in Company G. Company G's shares had a market price of £17.34 on 1 January 20X5.

On 1 January 20X5, Company H had total share capital of £220,000 and retained earnings of £660,000.

By 31 December 20X5, goodwill has been impaired by 10%.

Calculate the value of goodwill in the consolidated statement of financial position at 31 December 20X5.

Answer reference: Section 1.5

7. A parent company (P) sells goods to its 80% owned subsidiary (S) for £23,000. P's gross profit margin on those goods is 20%. Half of the goods remain in S's inventory at the year-end date.

What is the value of the unrealised profit that must be removed at year end as a consolidation adjustment?

Answer reference: Section 1.7

8. Company J purchases 65% of the share capital of Company K on 1 March 20X6. During the 12 months ended 31 December 20X6, Company K makes a profit of £360,300, and Company J makes a profit of £250,000.

Calculate the non-controlling interest share of profit in the consolidated income statement for the year ended 31 December 20X6.

Answer reference: Section 1.8

9. Company L purchased all of the shares in Company M a number of years ago. An extract from the individual income statements for the 12 months ended 31 December 20X5 are:

	Company L (£'000)	Company M (£'000)
Revenue	523	243
Cost of sales	(478)	(127)
Gross profit	45	116

During 20X5, Company M sold goods to Company L for £62,000. Some of the goods remain in Company L's inventory at 31 December 20X5 and the unrealised profit on these goods still held is £2,500.

Calculate consolidated revenue, cost of sales and gross profit for the year ended 31 December 20X5.

Answer reference: Section 1.8

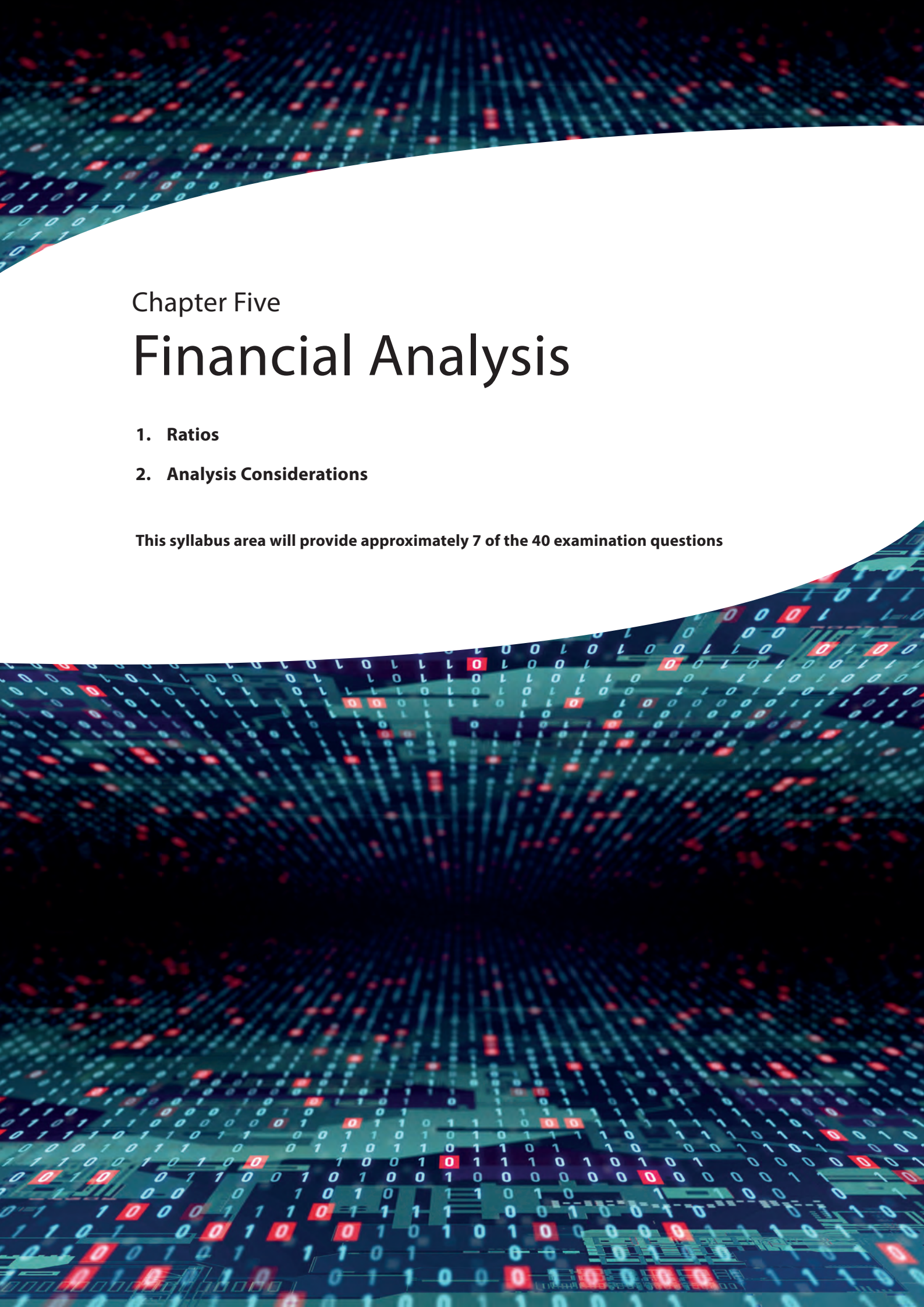
10. On 1 January 20X4, P buys 50,000 of Company N's 125,000 £1 ordinary shares. P has significant influence over Company N because of this 40% ownership. P also owns a number of subsidiary companies. The purchase price was £260,000. Company N's retained earnings at that date were £412,000.

By 31 December 20X4, Company N had generated profits for the year of £46,000.

Calculate the balances for:

- a. Investment in associate that will be shown on P's consolidated balance sheet at 31 December 20X4.
- b. Share of associate's profits that will be shown in P's consolidated income statement for the year ended 31 December 20X4.

Answer reference: Section 2



Chapter Five

Financial Analysis

1. Ratios
2. Analysis Considerations

This syllabus area will provide approximately 7 of the 40 examination questions



Introduction

The financial statements, namely the income statement, the statement of financial position/ balance sheet, the cash flow statement and all the associated notes, contain a vast amount of information. It is the role of the financial analyst to use this information to develop a substantiated view of the company's past performance and determine the extent to which it can be used as a prediction of future performance.

The financial statements are primarily prepared for the shareholders. However, they may have several other users such as lenders, creditors, the government, tax authorities, and so on. Each of these will be looking to use the accounts to get some indication of the:

- returns they are receiving, and/or
- risks they are facing.

A number of fairly standard ratios have been developed to assist with this process.

1. Ratios

A ratio is a calculation which brings together different elements of the financial statements. Ratios are very convenient for summarising and presenting information. In general, they are easy to understand and they can help to focus attention on the important aspects of business performance and risk (trading or financial).

A ratio is, however, meaningless in isolation. In order to be useful, a ratio must have some reasonable comparative, for example:

- prior year figures
- competitors' figures, and
- target figures.

We can then review how the company is doing compared with, say, the previous year. The ratio itself is not an answer, simply a means to an end. If all of our ratios this year are the same as they were last year, then our returns and risks for all interested parties may be unchanged, as long as this is consistent with competitors and economic indicators such as inflation and interest rates.

Ratios can be used to highlight trends over a number of years, which may not be so apparent from the figures themselves. These trends can then be used to assess how the company is performing.

When using ratios to focus our attention for analysis purposes, we will essentially be looking for:

- Discontinuities, ie, large changes in the ratios from one year to the next, or large variances of the ratio against competitors or budgets. These, in all probability, will be highlighting some anomaly.
- Trends illustrated by the ratios over a period of time. These may be upward/downward trends in terms of returns being achieved, or the risks being taken.

1.1 Definition of Ratios

Other than earnings per share which is covered by accounting standard IAS 33 (discussed in chapter 1), there is no strict definition of any ratio. What is described in the following paragraphs are standard methods of calculating ratios, and precisely how certain elements should be treated can be open to debate. It is the job of the analyst to determine the best way to deal with these items in any particular scenario, although the most important factor is consistent treatment from one year to another or from one company to another.

1.1.1 Ratio Groupings

Ratios are commonly grouped under five headings. This classification is important; if the examiner uses these terms, you will be expected to know which ratios are being referred to.

- **Profitability** – measures to assess the trading or operating performance of the company, ie, levels of trading profits generated and the effectiveness of the use of trading assets. Sometimes described as ‘performance’ ratios.
- **Liquidity** – measures to assess the risk that the company may be unable to pay its suppliers as the debts fall due and the company may cease to exist.
- **Activity/Efficiency/Working Capital** – measures to assess how efficiently the company utilises its resources and how working capital is managed. Working capital is finance needed for the day-to-day running of the company to buy inventory or to offer customers a credit period before cash is received.
- **Solvency/Capital Structure** – measures to assess the risks to the providers of finance due to the company’s level of borrowing (ie, gearing). These ratios can also be termed ‘financial risk’ ratios.
- **Valuation/Investors’ Ratios** – measures to assess the returns to providers of finance, who may be either shareholders or lenders.

There are effectively two sides to a business – a trading side and the financing side.

A company raises finance then uses this to enable it to trade. Our analysis will be used to measure the risks and returns on each side.

1.2 Profitability Ratios

5.1.4 Be able to calculate profitability ratios

The aim of profitability ratios is to measure the underlying trading performance of the business itself regardless of how it is financed. A common starting point is the calculation of return on capital employed (ROCE). ROCE is a very useful ratio to summarise the overall performance of the business in the period.

1.2.1 Return on Capital Employed

The return on capital employed is calculated as:

$$\text{ROCE} = ((\text{Profits from operations} + \text{Interest receivable}) / \text{Capital employed}) \times 100\%$$

Considerations

This profit figure can be viewed as operating profit plus interest receivable and income from other investments, ie, the profits that management has generated from the resources it has available. It is calculated before interest payable since that will clearly be dependent on the financing of the business – the larger the loans, the larger the interest payable.

The capital employed figure is the total trading assets (or total financing since they are equal) that can be identified by rearranging the balance sheet.

Example		
Calculating Capital Employed		
We have the following balance sheet showing net assets and shareholders' funds/equity.		
Balance sheet		£'000
Assets		
Non-Current Assets		50
Current Assets		60
Liabilities		

Non-Current Liabilities (provisions and borrowings)	(30)
Current Liabilities (trade and other payables)	(45)
Net assets	35
Equity	
Share Capital	12
Reserves	23
Total Equity	35

Rearranging to find capital employed:

Rearranged balance sheet	£'000	£'000
Assets		
Non-Current Assets		50
Current Assets	60	
Current Liabilities	(45)	
Net Current Assets		15
Total Assets Minus Current Liabilities		65
Total Financing		
Share Capital		12
Reserves		23
Non-Current Liabilities		30
Equity and Non-Current Liabilities		65

Based on this, capital employed can be calculated from the financing side as:

Capital employed = Shareholders' funds / equity + Non-current liabilities + Borrowings in current liabilities

Or capital employed can be calculated from the trading side as:

Capital employed = Total assets – Current liabilities (excluding borrowings in current liabilities, such as overdrafts, lease obligations)

Example

This example uses information from the illustrative financial statements included in the Appendix in section 2.3.1.

ROCE

$$\text{ROCE} = (6,484 + 62 + 303) / (33,041 + 4,445 + 137 + 16,942)$$

$$\text{ROCE} = (6,849 / 54,565) \times 100\%$$

$$\text{ROCE} = 12.6\%$$

ROCE – Before non-recurring item (included in Administration Costs)

$$\text{ROCE} = ((6,849 + 3,192) / 54,565) \times 100\%$$

$$\text{ROCE} = 18.4\%$$

For this example, we have calculated the capital employed as shareholders' funds, including non-controlling interest, non-current liabilities and the bank overdraft and lease liabilities. These liabilities are being treated as part of the financing of the company, not the trading assets.

The ratio can be calculated either using the numbers in the financial statements or by adjusting for non-recurring items. These are items which are not likely to recur, such as restructuring costs or gains/losses on disposal of an asset. Ratios calculated on an adjusted basis can be more useful for analysing trends. However, the analyst needs to consider if the non-recurring item is actually a one-off item or a regular feature of the income statement.

Potential Problems

Ideally, it would be best to use the average capital employed for the calculation, as the aim is to match the profits generated throughout the year to the capital or assets that have been used to generate them, or the total financing of the business.

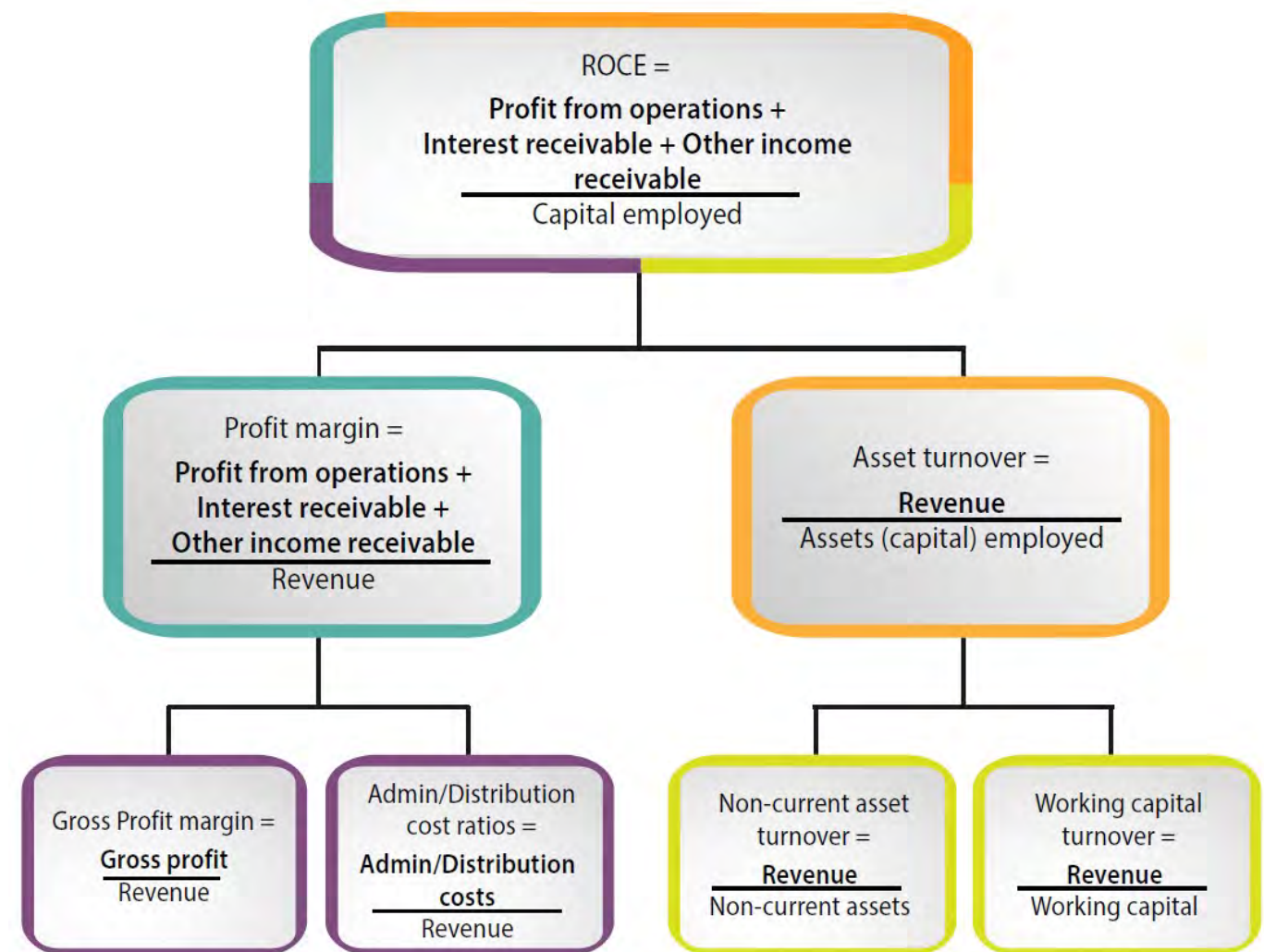
However, it is more common to see the calculation based on year-end figures. This can lead to some major distortions, especially if there have been large changes in capital employed during the year, ie, from the acquisition of a subsidiary or the raising of funds near the year end.

Having established the return on capital employed, it is usual to consider what has caused the ratio to change from one year to the next.

The return on capital employed ratio can be disaggregated into its component parts.

- Profit margin (showing business profitability).
- Asset turnover (showing business efficiency).

The following diagram illustrates this disaggregation.



Multiplying the profit margin by the asset turnover gets back to the return on capital employed since the revenue figures cancel out. We will now consider each of these sub-ratios in more detail. Understanding changes in each of these ratios will help us to see what is driving the overall change in return on capital employed.

1.2.2 Profit Margins

A profit margin is a measure of the profit achieved per £1 sale generated.

$$\text{Profit margin} = (\text{Profits} / \text{Revenue}) \times 100\%$$

Considerations

From our diagram in section 1.2.1, we have taken profit as profit from operations and other income. This ensures that the ratios exactly 'interlock'. However, this brings with it the problem that not all elements of this profit as defined here have any relationship to the levels of revenue. For example, this profit is stated after:

- interest receivable
- income from non-current asset investments, and
- share of profits of associated undertakings.

None of the above three are related to revenue. In some cases, it might be better, therefore, particularly if examining the profit margin in isolation, to use the operating profit figure only. However, we will continue using our 'full' profit before interest payable and tax (PBIT) figure for now.

Example

Again, using information contained in our illustration financial statements in section 2.3.1.

$$\text{Profit margin} = (6,849 \text{ (see ROCE in section 1.2.1)} / 135,761 \text{ (Revenue)}) \times 100\%$$

$$\text{Profit margin} = 5.0\%$$

Analysis Points

Once we have calculated this ratio, we need to make something meaningful out of it. When doing this, it is important to consider the causes and possible consequences, not just the mechanical calculation of the numbers.

Rising profit margins are good news, leading to higher levels of profits. However, these higher profits may mean that the company loses customer loyalty if they perceive that they are being exploited by excessively high prices. Alternatively, high prices may attract competitors into the field, in which case the company may lose a substantial amount of market share.

Conversely, margins going down may normally be perceived as bad news. However, it may be a consequence of a policy of low pricing to increase market share; or it may be that the company is incurring high development costs and future years' profitability will be that much higher as a result.

1.2.3 Asset Turnover

The asset turnover ratio assesses the effectiveness of the use of the trading assets available.

$$\text{Asset turnover} = \text{Revenue} / \text{Assets (capital) employed}$$

Considerations

To make these ratios exactly interlock, as in the diagram in section 1.2.1, we would need to take all the capital employed as being the denominator in this calculation. However, again, some assets bear no relationship to turnover whatsoever, eg:

- investment in associated undertakings, and
- short-term investments.

It may therefore be more appropriate to take just those trading assets that have contributed to turnover.

Example

Using information from our illustration financial statements in section 2.3.1.

$$\text{Asset turnover} = £135,761 / £54,565 \text{ (see ROCE in section 1.2.1)}$$

$$\text{Asset turnover} = 2.49x$$

Potential Problems

Again a problem with this ratio, in common with the problem of return on capital employed, is that we are comparing a full year's transactions (revenue) to a year-end balance sheet figure (assets employed). Unless this year-end figure is representative of the assets employed throughout the year, we will not exactly be comparing like-with-like and there may be some distortions.

For example, if the company buys a subsidiary or raises new finance close to the year end, then the year-end assets employed would be substantially higher than the general level throughout the year.

Another problem is the impact of accounting policies. If, for example, non-current assets are revalued this year then this will have two effects:

- Profits will be down due to increased depreciation charges.
- Capital assets employed will be up due to the increase in non-current asset net book values.

The result will be that the return on capital employed and asset turnover figures will be reduced, although the effectiveness of the business, in truth, may be unaltered. It is very difficult to remove these distorting effects. It is probably more convenient to calculate the ratios but to note any distortions.

Analysis Points

Again, when considering this ratio, it may be tempting just to state the obvious – but take care. We should consider the causes, not just the numbers.

Considering just the numbers, it would be tempting to believe that increased asset turnover is a positive thing. However, it may arise from:

- **overtrading**, which would result in liquidity problems, or
- a deterioration of the capital base, ie, sales are not rising, rather the asset base is falling.

As the diagram in section 1.2.1 illustrates, this ratio may be further sub-analysed into, for example, working capital turnover and non-current asset turnover, each of which may be an appropriate ratio for a particular sort of industry. Non-current asset turnover may be an appropriate ratio in a capital-intensive industry where a large amount of the capital of the business is tied up in non-current assets. The analyst needs to decide which ratios to use and how to use them.

1.2.4 Operational Gearing

The operational gearing ratio gives the percentage change in profits per 1% change in revenue, which may be calculated as:

$$\text{Operational gearing ratio} = (\text{Revenue} - \text{Variable costs}) / \text{Profit}$$

Considerations

This ratio is a measure of operational risk, ie, risk to the operating profit figure, and is assessing the levels of variable and fixed operating costs in the business. Variable costs are costs whose level varies directly with the level of output, hence if sales increase/(decrease) then variable costs increase/(decrease), eg, raw material costs. Fixed costs are those whose level remains constant regardless of output levels, eg, rent, rates, depreciation.

The greater the level of fixed costs in the business, the greater the variation in the profit figure as a result of revenue changes. Businesses with high fixed cost bases have high operational gearing.

Example

A company sells its product for £10 per unit, has variable costs of £6 per unit and fixed costs of £15,000 per annum. The normal level of output is 10,000 units p.a., but if output levels vary, we will see the following.

Output (Units)	8,000	10,000	13,000
	£'000	£'000	£'000
Revenue	80	100	130
Variable costs	(48)	(60)	(78)
	32	40	52
Fixed costs	(15)	(15)	(15)
Profit before tax	17	25	37

The operational gearing calculated at the normal output level of 10,000 units is:

$$\text{Operational gearing ratio} = (100 - 60) / 25 = 1.6$$

What we can see is that a 20% fall in revenue (down to 8,000 units from 10,000) results in a 32% (20% x 1.6) fall in profits, a fall of £8,000 (25,000 x 32%) in profit before tax from £25,000 to £17,000.

Similarly, a 30% increase in revenue (up to 13,000 units from 10,000) results in a 48% (30% x 1.6) increase in profit before tax, a rise of £12,000 (25,000 x 48%) from £25,000 to £37,000.

What this ratio is considering is the levels of profit generated by the company before (the top line) and after (the bottom line) suffering the fixed costs.

Potential Problems

The difficulty that we have in applying this idea in the analysis of the accounts of a company is that the accounts do not reveal the extent of the fixed and variable costs. An income statement by function of expense breaks down the operating costs into cost of sales, distribution costs and administrative expenses. Within each of these headings there may be an element of variable costs and an element of fixed costs. An income statement classifying expenses by their nature may enable this ratio to be calculated, however, this is still doubtful.

Operational gearing is more a factor to consider given the nature of the business, rather than a statistic that can be calculated. For example, capital intensive businesses will suffer from high fixed costs due to the depreciation of their non-current assets. We can conclude therefore that capital intensive businesses are more likely to have high operational gearing and thus more profit volatility due to the high proportion of fixed costs in their cost base.

1.3 Liquidity Ratios

5.1.2 Be able to calculate liquidity ratios

Introduction

There are two main sources of information relating to the liquidity position of a company.

- the balance sheet, and
- the cash flow statement.

The ratios we look at below aim to establish one of two things:

- Do we have the resources to meet our liabilities in hard cash terms?
- Are we realising those resources quickly enough to pay off the liabilities as they fall due?

As we will see, some of these ratios are rather blunt tools but they are useful for showing trends and are frequently used in loan agreements.

1.3.1 Current Ratio

The purpose of this ratio is to see whether the current assets recoverable within one year are sufficient to cover the liabilities that fall due within one year.

$$\text{Current ratio} = \text{Current assets} / \text{Current liabilities}$$

Example

Using information from our illustration in section 2.3.1.

$$\text{Current ratio} = £57,653 / £43,666$$

$$\text{Current ratio} = 1.32x$$

Practical problems when calculating or using this ratio are as follows.

- Overdrafts will be included within current liabilities but are frequently payable after more than one year in practice. Banks frequently allow companies to extend overdrafts for several years.
- Realisation of inventory; inventory is contained within current assets and is therefore almost automatically assumed to be realisable within one year, but this may not necessarily be the case. Unlike receivables there will be no note anywhere indicating the recoverability or likely timescale for the realisation of inventories.
- This ratio completely ignores the timing of cash flows within the period. In theory it could be possible that all the liabilities are payable now and all the assets are recoverable in 12 months' time. Although they match in terms of being 'current', in actual cash flow terms they do not.

Interpretation of this ratio is tricky. A high current ratio implies high liquidity, as current assets provide good coverage to current liabilities. However, high liquidity can be also inefficient as we will see when we discuss working capital in section 1.3.3 and section 1.4.4 below. What we are looking for is a balance between adequate liquidity and ensuring there is an efficient usage of assets in the business.

The current ratio is very sector dependent. Current ratio norms vary significantly depending on the underlying business model. A current ratio less than one arises if a company has greater current liabilities than current assets. This, in itself, does not necessarily mean liquidity problems. There are many sectors for which a current ratio less than one is the norm (eg, retail – this sector is typically characterised by low receivables and inventory, but high levels of payables).

1.3.2 Quick Ratio

The quick ratio is an adaptation of the current ratio designed to remove the problem of inventory.

$$\text{Quick ratio} = (\text{Current assets} - \text{Inventory}) / \text{Current liabilities}$$

Considerations

The quick ratio considers just the readily realisable assets (cash, investments and receivables) and whether they are sufficient to cover the short-term liabilities of the business. Being a modification of the current ratio, it suffers from the same problems, excluding realisability of inventory.

Example

Using information from our illustration in section 2.3.1.

$$\text{Quick ratio} = (£57,653 \text{ (see above)} - £19,420) / £43,666$$

$$\text{Quick ratio} = £38,233 / £43,666$$

$$\text{Quick ratio} = 0.88x$$

Our company has a quick ratio of less than one. This does not mean that it is insolvent and unable to pay off its liabilities. However, depending on the type of business, it may be a sign of liquidity problems.

As discussed in section 1.3.1, the current and quick ratios will be influenced by the sector in which the company operates. For example, a supermarket group may have a current and quick ratio of less than one. Supermarkets usually have very low receivables because most customers pay for their goods immediately. Inventory is normally kept at low levels by using a just-in-time system, which delivers the inventory shortly before the sale. This results in low levels of current assets compared to current liabilities, which in turn give rise to low current and quick ratios.

1.3.3 Analysing the Cash Flow Statement

No analysis of liquidity would be complete without a review of the company's cash flow statement. One of the objectives of statement of cash flows is to ensure that it is relatively easy to read. IAS 7 achieves this objective by requiring companies to adopt a standardised format which contains a wealth of useful information.

Cash Flow from Operations

When analysing cash flow from operations, it is important to understand how the cash flows have been generated and why they differ from the previous year. This can be done by looking at the reconciliation of operating profits to cash flow from operations. Reasons for changes in cash flow include the following changes in:

- operating profits, and
- working capital levels.

Changes in Operating Profits

The underlying profits of the business may have changed. The reasons for this will be apparent from the analysis of the income statement. For example, margins or volumes may have changed. Changes in volumes can be linked into other areas of the statement of cash flows, such as purchases of non-current assets and changes in levels of working capital in the business.

Changes in Working Capital Levels

Even if profits have risen, cash flow may not benefit if there has been a significant increase in receivables over the year, or the company has built up its inventory to meet anticipated future demand.

It is often the case that, as businesses expand, they suffer a severe strain on their cash resources since they have to pay cash out up front, buying non-current assets and inventory, but only receive cash later after they make the sales and receive payments from their customers. This may only be a short-term problem as the cash flows from receivables are received. However, if a business does not have sufficient finance from shareholders and banks to cover the initial cash outflows, it may become insolvent. This is known as 'overtrading' and is a common cause of insolvency for start-up and small expanding companies.

Conversely, a business may suffer poor profits but still generate operating cash in the short term by squeezing working capital levels. For example, a company could take longer to pay its suppliers, reduce inventory levels and pressurise its customers to pay more quickly. In the short term, this will give improved cash flow. However, it will only give a one-off benefit to the company, since working capital cannot be squeezed indefinitely, and may result in higher cash outflows in future years if working capital is restored to its previous levels. As a result, high cash flow due solely to falling working capital levels should not always be viewed as being good news for a company.

Non-Cash Items in Profit

Apart from working capital, there are various non-cash items in profit, such as depreciation and provisions. If a company has high depreciation charges, then its operating cashflows can be higher. Note, however, that such a company must have high non-current assets and therefore some of this operating cash flow will need to be used to pay for replacement of non-current assets, covered in the investing activities section of the statement of cash flows.

Interest Paid

The level of interest paid should be compared to the previous year and reasons for differences identified. This may be due to changes in interest rates or levels of borrowings over the year. If borrowings have increased, then the use of the borrowed funds should be identified. If borrowings have fallen, then the source of cash to repay the borrowings should be identified.

The amount of interest paid should be compared to the interest charge in the income statement and explanations found for any significant differences. These may be due to the accruals concept. For example, where interest is paid annually on a bond, if it is issued one month into the year, then the income statement will show 11 months of interest charge accrued while no interest has yet been paid. Alternatively, the company may be capitalising interest as part of a non-current asset that the loan is financing, rather than charging it as an expense in the income statement (this will be apparent from the interest note to the income statement). Another possibility is that the company has issued a zero-coupon bond, where interest is being charged to the income statement over the bond's life, but no interest is paid until redemption.

A comparison of interest paid and interest charged to the absolute level of borrowings in the statement of financial position is also useful. For example, if the interest paid/charged seems very low compared to the closing borrowings level, it may be that the borrowings were made very late in the year. This will be reinforced by looking at whether the opening borrowings are significantly lower than the closing borrowings.

The company's level of gearing can be assessed by looking at the level of interest paid relative to the level of operating cash flow available to cover the interest.

The level of interest cover in cash terms can be assessed by calculating the following ratio, the result of which shows the number of times the interest payments could have been made out of operating cash flows. The higher this figure is, the less of a concern there would be about the ability of the company to service its debt.

$$\text{Interest cover in cash flow} = \text{Operating cash flow} / \text{Interest paid}$$

Preference Dividends Paid

Preference dividends paid are non-discretionary. The cash outflow should therefore be fairly constant year on year. An increase may indicate additional preference shares issued in the year, whereas a decrease could be from a redemption of existing shares or, more worryingly, be indicative of an inability to pay a dividend as a result of poor cash flow or insufficient profits.

Investment Income

A company with high levels of investment income will presumably have high levels of surplus cash on its statement of financial position. While this means that the company is in a very strong financial position, whether or not it is effectively using the cash being generated should be considered. It may be that the business needs cash balances for the future or it may be that the company has insufficient investment opportunities that yield acceptable returns. In this case, there will be a case for returning surplus cash to shareholders to reinvest elsewhere.

Taxation

The level of tax paid should be considered in relation to the tax charge and the profits of the company. In doing this, the analyst will need to consider the source of the tax payments.

- Corporation tax in the UK, which will be based on the quarterly instalments per the tax regime for large companies.
- Overseas tax, which will depend on the overseas tax jurisdiction in which the company is operating.

Capital Expenditure and Financial Investment

The level of capital expenditure should be evaluated to establish if the company is replacing its non-current assets and maintaining its level of underlying capital employed. A simple test here is to compare the depreciation charge with the level of capital expenditure. The idea is that the depreciation charge indicates the level of capital expenditure required to replace non-current assets and maintain the asset base, called maintenance capital expenditure.

For example, a company has non-current assets with a two-year life, which cost £1,000 each. The company has two assets and it replaces these in alternate years, ie, it buys one new asset a year. The cost of buying the asset each year will be £1,000. This is the same as the annual depreciation charge for two assets of £1,000.

This simple idea has several limitations.

- Inflation is ignored.
- It is assumed that the depreciation charge and the capital expenditure relate to the same assets, whereas the company may be contracting one area of its business and expanding in another, or replacing existing expensive non-current assets with newer assets that are more efficient to operate (meaning fewer are needed) but cheaper to buy.

The level of capital expenditure can also indicate whether a company has expanded its operations significantly over the year or is in a process of contraction. In either case, the reasons for this, the business areas in which it is occurring and the implications for the company need to be considered.

Cash flows from financial investment will indicate the extent to which the company is lending funds to other entities and whether those loans are being repaid. Large loans to other entities may be indicative of a long-term cash surplus, which could be better utilised by acquisitions or return of funds to shareholders.

Acquisitions and Disposals

Purchase and sale of businesses will highlight several important issues.

- Acquisitions may indicate that the company is attempting to utilise a cash surplus in order to provide greater returns to shareholders. Alternatively, the company may be attempting to gear up its position where its current debt levels are considered too low.
- Disposals may be indicative of a strategy to release funds from non-core businesses in order to invest in growth within the main business areas. Alternatively, the company may be in urgent need of cash to bolster funds available for operations.
- The cash flows in this area need to be reviewed in conjunction with the financing section (to determine how acquisitions have been funded or disposals from sale used to reduce borrowing) and the purchase of non-current assets if funds from disposals have been used for financing organic growth.

Equity Dividends Paid

Dividends paid will link closely to the profit performance of the company. If a company has increasing profits, it is likely that dividends per share will be increased. Notwithstanding this, it is often the case that companies may suffer falls in profits but maintain the dividend to avoid upsetting their shareholders, at least for the short term. The statement of cash flows can be used to assess whether the business has the underlying ability to generate cash to justify paying a dividend.

Financing Activities

Having generated its operating cash flows and paid interest, dividends, tax and capital expenditure, a company will either have surplus cash or a deficit. Surplus cash will need to be utilised in some respect and a deficit will need to be financed. The financing activities section and the change in cash and cash equivalents will tell us how this has happened.

Surpluses may have been used to repay debt or complete a share repurchase operation, in which case, this will be apparent from the financing activities. Alternatively, they may have been used to increase cash balances or decrease overdrafts and short-term borrowings, which will be evident from the change in cash and cash equivalents. This can be determined from the statement of financial position.

Deficits may have been funded by an increase in borrowings, a share issue or a change in cash and cash equivalents. Each of these can be identified from the statement, as with the use of surpluses.

Even if the company has no significant surplus or deficit from its operations for the year, the financing and change in cash and cash equivalents may indicate a change in the source of finance, for example, short-term borrowings may have been repaid through a share issue or a long-term borrowing.

1.4 Activity/Efficiency Ratios

5.1.1 Be able to calculate activity ratios

Introduction

Activity or efficiency ratios indicate how a business is managing its working capital. Working capital represents finance that cannot be used elsewhere in the business and it must be serviced by paying interest on debt finance or managing returns to shareholders. Therefore, it is important that companies manage their working capital levels effectively. Working capital is tied up in inventory that is held and receivables balances waiting to be received in cash. Working capital is relieved by taking credit offered by suppliers.

1.4.1 Inventory Turnover and Inventory Days

This measure gives an indication of how quickly a business is selling its inventory and how many times the warehouse inventory is 'turned over' or replaced during the year.

$$\text{Inventory turnover} = \text{Cost of sales} / \text{Inventory}$$

$$\text{Inventory days} = (\text{Inventory} / \text{Cost of sales}) \times 365 \text{ days}$$

The cost of sales figure shows the total cost value of the goods sold in the year. The inventory figure shows the total cost value of the goods still held at the year end, or an average figure for the year. The inventory turnover ratio therefore shows how many times during a year we can expect to sell our normal holding of inventory. For example, if this ratio was 6, then it takes us two months to sell our inventory on average; if the ratio was 12 it takes us one month, and so on.

The inventory days ratio tells us how long inventory is held, on average, before it is sold.

Considerations

Within any business the ideal is to hold no inventory whatsoever, ie, any item arrives from the supplier exactly at the time the customer walks in through the door to buy it, so they can specifically be matched one to another and the company need not hold any inventory at all. However, this is unlikely to be the case in practice.

In practice, companies will need to hold inventory on the shelves for customers to select, but they have got to make sure they do not hold too much inventory. Holding too much inventory will tie up much of the company's resources in goods for resale, and may lead to high insurance costs and high inventory obsolescence. Similarly, too little inventory will mean that customers cannot be served and may choose to go elsewhere. There needs to be a good balance somewhere in between.

From the illustrative financial statements in section 2.3.1:

$$\text{Inventory turnover} = £83,604 / £19,420$$

$$\text{Inventory turnover} = 4.31x$$

$$\text{Inventory days} = (£19,420 / £83,604) \times 365$$

$$\text{Inventory days} = 84.8 \text{ days}$$

Potential Problems

This ratio, in common with others, is comparing a full year's transactions (cost of sales) to a year-end balance that may not be representative of the levels of inventory throughout the year. This would especially be the case in a business with seasonal demand and hence seasonal inventory levels.

Analysis Points

Inventory turnover indicates the amount of inventory held in terms of the time it may take to realise it, and any movement in this ratio from one year to the next may indicate a tendency to hold too much or too little inventory.

As we have already pointed out, the ideal amount of inventory and the inventory turnover rate are dependent on the business circumstances. For example:

- A supermarket would expect a very high inventory turnover for its milk – perhaps as high as 365x.
- A whisky distiller whose inventory takes several years to mature would expect an inventory turnover rate of say 0.1x.

Hence, we should always consider the nature of the business.

However, care needs to be taken in stating what the ratio is showing. For example, an increased inventory turnover may naively be considered fairly good and viewed as confirming increased levels of revenue. However, it may be a result of holding very low levels of inventory, which, as we have just noted, may be commercially bad.

1.4.2 Receivables' Collection Period

This measure gives an indication of how quickly a business is realising its trade receivables, ie, turning them into cash.

$$\text{Receivables' collection period} = (\text{Trade receivables} / \text{Revenue}) \times 365 \text{ days}$$

Considerations

Assuming all sales are made on credit, the revenue figure will represent the total invoiced sales in the year, and the trade receivables' figure will represent the unpaid invoices at the year end. Hence, receivables over revenue shows the proportion of the year's sales that have not been paid for, ie, the credit period we are offering.

Example

Using information from our illustrative financial statements in section 2.3.1.

$$\text{Receivables' collection period} = (£21,753 / £135,761) \times 365 \text{ days}$$

$$\text{Receivables' collection period} = 58.5 \text{ days}$$

Potential Problems and Analysis Points

Again, the problem with this ratio is that we are comparing the year-end balance (receivables) to a year's transactions (revenue), which could lead to some distortions if, for some reason, these figures are not representative.

For example, if sales are very seasonal, they may peak at one time in the year and reach a low point at another time in the year. We would expect the receivables to be correspondingly high at one point in the year and low at another point in the year. The revenue figure would be the sum total of all the sales in the year, regardless of the seasonal nature. Clearly, however, we would see substantially different receivables' collection periods if the year-end was when the company had a high receivables' figure, or when it had a low receivables' figure.

1.4.3 Payables' Payment Period

This measure shows how quickly a business is settling its liabilities.

$$\text{Payables' payment period} = (\text{Trade payables} / \text{Cost of sales}) \times 365 \text{ days}$$

Considerations

This ratio, in a very similar way to the receivables' collection period, measures the amount of credit taken from suppliers. To be a worthwhile and valid comparison, we really need to try to compare invoiced payables to invoiced costs. Remember, however, that in a manufacturing business the cost of sales may include such things as wages and salaries of the production staff, which will distort the ratio unless care is taken.

Example

Using information from our illustration financial statements in section 2.3.1.

$$\text{Payables' payment period} = (£18,702 / £83,604) \times 365 \text{ days}$$

$$\text{Payables' payment period} = 81.6 \text{ days}$$

Potential Problems and Analysis Points

The problems with the use of this ratio are identical to those identified for the receivables' collection period above.

1.4.4 Working Capital Cycle

The previous three ratios are really looking at the speed of cash flow around the working capital cycle:

- The inventory turnover ratio shows how quickly inventory is being turned into a sale (receivables).
- The receivables' collection period shows how quickly those receivables are being turned into cash (in days).
- The payables' payment period shows the timescale over which the company has to pay off its suppliers.

The cash conversion cycle can be calculated as:

$$\text{inventory days} + \text{receivable days} - \text{payables days}$$

This tells us how long cash is tied up in working capital requirements.

An organisation should always look to maintain a balance in these areas; in particular, between the collection period for receivables and the payment period for payables, assuming they are of a similar scale.

If a company is forced by its customers to increase the credit period offered, it must endeavour to increase the credit period it can get from its suppliers; otherwise, the company will find itself with a cash flow problem, since it will have to settle its liabilities without having the cash available to do so.

This is quite a frequent problem for businesses that fall into the liquidity trap. Such businesses, in an effort to boost sales, may extend credit terms to their customers. This has the effect of increasing the sales as anticipated. However, it causes a mismatch of the cash flows in from receivables and out to payables, and subsequent liquidity problems may arise.

1.5 Solvency/Capital Structure

5.1.3 Be able to calculate solvency ratios

Introduction

Capital structure ratios consider the composition of the financing side of the capital employed equation and address the relationships between:

- interest-bearing borrowed capital, on which the return must be paid, and
- shareholders' capital, on which the return is discretionary.

Capital structure ratios can also be described as financial risk ratios, solvency ratios and gearing ratios.

1.5.1 Borrowings and Financial Risk

It is generally accepted that high levels of borrowings imply high financial risk for the company. What do we mean by financial risk and why is it a problem? Let us consider this with two examples.

Example 1

Consider an individual who buys a £32,000 house with a £30,000 mortgage and an investment of £2,000 of their own cash, then subsequently sells it in five years' time (ignore mortgage repayments) for:

- a. £64,000 (ie, the price has doubled – a 100% increase)

Here the individual is walking away with a £32,000 profit on effectively a £2,000 investment – a 1,600% return.

- b. £16,000 (ie, the price has halved – a 50% decrease)

Here, the individual has lost £16,000 on their £2,000 investment – an 800% loss.

The scale of the profits and losses is significantly greater than the change in the house price. If risk is viewed as the variability of returns, we can see that the risk to the investor is much greater than the basic risk in house prices.

Example 2

A company has interest payable of £30,000 per annum. In three different years, it generates three different levels of operating profits as shown below.

	Year 1	Year 2	Year 3
	£'000	£'000	£'000
Operating profits	50	100	150
Interest	(30)	(30)	(30)
Profit before tax	20	70	120

We can see from the above that when operating profits fluctuate 50% up or down from their average level of £100,000, the profit before tax fluctuates by 71.43% from its average level, ie, profits before tax are significantly more volatile than operating profits themselves, and this volatility increases as the interest charge (or gearing) rises.

NB: Financial gearing is not necessarily introducing risk in itself. Financial gearing is augmenting or amplifying the risk inherent in the basic operations. If operating profit did not vary from £100,000, the profit figure before tax would always be £70,000. If there is no risk in operating profit, there is no risk in the profit before tax introduced by the gearing.

The level of gearing does, however, amplify the effect of changes in operating profit on changes in profit before tax. Work out for yourself what the variability would be if the interest paid each year was £40,000 (answer +/- 83.33%).

1.5.2 Gearing Ratio

The gearing ratio examines the proportion of borrowings (debt) in the company's capital structure versus equity shareholders' funds.

$$\text{Debt to equity} = ((\text{Interest-bearing loans} + \text{Preference share capital} / \text{Equity shareholder's funds}) \times 100\%)$$

Considerations

We consider only interest-bearing debt (ie, exclude all non-interest-bearing liabilities) since this is what is causing the risk to profit before tax, hence ultimately the risk to profits after tax and amounts available for payment as dividends to our shareholders.

Interest-bearing debt includes: loans, overdrafts (usually, bonds, debentures, leases. Preference shares are considered a form of borrowing because the dividend is usually at a fixed amount and has to be paid before any dividend to the ordinary shareholders. Equity (the denominator) comprises ordinary share capital and all other reserves.

Example

Using information from our illustrative financial statements in section 2.3.1.

$$\text{Debt to equity} = ((16,942 + 137 + 1,356 + 1,016 + 837) / 32,138 - 837) \times 100\%$$

$$\text{Debt to equity} = (20,288 / 31,301) \times 100\%$$

$$\text{Debt to equity} = 64.8\%$$

Potential Problems

Accounting Policies

The gearing ratio can be greatly influenced by the accounting policies. For example, if non-current assets are revalued upwards then shareholders' funds will rise (since the revaluation surplus has increased) but there will be no change in the debt figure, hence the gearing ratio will fall. If we consider the impact of this on our interest cover, however, a larger value of non-current assets will result in a larger depreciation figure in subsequent years; hence, a lower operating profit and therefore a lower interest cover in subsequent years. Therefore, if a policy of revaluation is adopted in a year, it will distort both the balance sheet and income statement ratios compared to the previous years.

Analysis Points

'Is there an optimal gearing ratio?' is a question frequently asked. The answer is no, not a general one, but certainly the level of gearing a business can stand can be determined in some way. As our example above shows, if there is no variability in operating profit, then financial gearing is of no consequence whatsoever.

Financial gearing is only a factor to consider if operating profits do vary, in which case financial gearing amplifies that variation. Therefore, in more stable businesses, such as utilities, with steady levels of earnings, they can stand a higher level of gearing than in a volatile industry, such as high technology businesses.

As with all ratios, again, the most important thing is not the absolute value but the trend that we are seeing. Are we seeing a trend of increasing financial risk or a trend of reducing financial risk?

1.5.3 Net Debt to Equity Ratio

This is an alternative to the above which takes account of the cash that a business may also hold which could be used to repay debt.

$$\text{Net debt to equity} = ((\text{Debt as above} - \text{Cash and current asset investments}) / \text{Equity shareholders' funds}) \times 100\%$$

Considerations

We should consider the ability of the company to use the cash it has available to repay debt. For example, it may be that some of the cash held is cash received on account, from customers, that cannot be used for the repayment of debts in general.

Example

$$\text{Net debt to equity} = ((20,288 \text{ (as above)} - 6,425 - 3,926) / 31,301) \times 100\%$$

$$\text{Net debt to equity} = (9,937 / 31,301) \times 100\%$$

$$\text{Net debt to equity} = 31.7\%$$

1.5.4 Lenders' Debt to Equity Ratio

This is a relationship that our unsecured lenders would consider as a measure of the risk to their returns.

$$\text{Lenders' debt to equity} = (\text{Total borrowings including non-interest (bearing debt)} / \text{Total shareholders' funds (including preference shares)}) \times 100\%$$

Considerations

Here, total debt equals debt as defined above plus non-interest-bearing debt, ie, all obligations to pay all liabilities. This is therefore useful to lenders, who are just one of the many creditors of a company, all of whom need to be paid off.

Example

$$\text{Lenders' debt to equity} = ((43,666 + 4,445) / 32,138) \times 100\%$$

$$\text{Lenders' debt to equity} = (38,111 / 32,138) \times 100\%$$

$$\text{Lenders' debt to equity} = 149.7\%$$

Potential Problems and Analysis Points

The same problems arise in the context of this ratio as with the debt to equity ratio above.

1.5.5 Interest Cover

This ratio considers gearing from the viewpoint of the income statement.

$$\text{Interest cover} = (\text{Profit from operations} + \text{Interest receivable} + \text{Other income receivables}) / \text{Interest payable}$$

Considerations

The interest cover gives a measure of the ability of the company to pay the fixed interest on borrowings out of its profits for the year. Clearly, the higher the level of interest cover, the less risk there is to either shareholders or lenders. However, again there is no optimal level.

Example

$$\text{Interest cover} = (£6,849 \text{ (see ROCE above)} / £3,176) \times 100\%$$

$$\text{Interest cover} = 2.16x$$

Potential Problems and Analysis Points

These are the same as those for debt to equity ratios.

1.5.6 Asset Cover (or Capital Cover)

In the same way that lenders are concerned about the interest cover, they may also be concerned over the safety of the loan itself as demonstrated by the assets available to repay it. The asset cover is calculated as:

$$\text{Asset cover} = (\text{Total assets} - \text{Current liabilities}) / \text{Loans payable}$$

Considerations

If there are a number of loans with different priorities of repayment in a winding up, the asset cover is on a cumulative basis.

Example

In order of priority, debt can be analysed as:

Debt	Value (£'000)	Cumulative (£'000)
Lease liability (secured on asset)	1,153	1,153
Unsecured loans and bank overdraft	18,298	19,451

Based on the illustrative financial statements, total assets less current liabilities excluding bank overdraft and the current instalments due on loans and finance leases is $£81,152 - 43,666 + £16,942 + £137 = £54,565$.

Hence, asset covers are:

$$\text{Finance lease} = 54,565 / 1,153 = 47.3x$$

$$\text{Loans} = 54,565 / 19,451 = 2.8x$$

Case Study

The following five-year summary relates to Wandafood Products plc, and is based on its financial statements.

			20X5	20X4	20X3	20X2	20X1
Financial ratios							
Profitability							
Margin	Operating profit / Revenue	%	7.8	7.5	7.0	7.2	7.3
Return on capital employed	PBIT / Capital employed	%	16.3	17.6	16.2	18.2	18.3
Interest and dividend cover							
Interest cover	PBIT / Net finance charges	times	2.9	4.8	5.1	6.5	3.6
Dividend cover	Earnings per ordinary share / Dividend per ordinary share	times	2.7	2.6	2.1	2.5	3.1
Debt to equity ratios							
	Net borrowing / Shareholders' funds	%	65.9	61.3	48.3	10.8	36.5
	Net borrowing / Shareholders' funds + Non-controlling interests	%	59.3	55.5	44.0	10.1	33.9

Liquidity ratios							
Quick ratio	Current assets – Inventories / Current liabilities	times	0.74	0.73	0.79	1.14	0.93
Current ratio	Current assets / Current liabilities	times	1.34	1.31	1.42	1.79	1.75
Asset ratios							
Operating asset turnover	Revenue / Capital employed	times	2.1	2.4	2.3	2.5	2.5
Working capital turnover	Revenue / Working capital	times	8.6	8.0	7.0	7.4	6.2
Per share							
Earnings per share							
Pre-tax basis	pence		23.62	21.25	17.96	17.72	15.06
Net basis	pence		15.65	13.60	10.98	11.32	12.18
Dividend per share	pence		5.90	5.40	4.90	4.60	4.10
Net assets per share	pence		102.10	89.22	85.95	85.79	78.11

Requirements

Prepare a report on the company, clearly interpreting and evaluating the information given.

Solution

Wandafood Products – Five-Year Summary: 20X1 to 20X5

Prepared by: An Analyst

Date: 28 February 20X6

Introduction

This report discusses the trends shown in the five-year summary prepared from the published accounts for the five years ended 31 December 20X5. It also considers how price changes over that period may have limited the usefulness of the historical cost data provided.

Profitability

The net profit margin has remained fairly constant, although it dropped in 20X3. Asset turnover has decreased over the five years, pulling back a little in 20X4. Return on capital employed, the primary ratio produced by combining these two secondary ratios, has therefore decreased over the period but was at its lowest in 20X3.

These findings seem to indicate that assets are not being used more efficiently and that this has caused the decrease in return on capital employed. Inflation may be responsible for increases in revenue, which would mask even worse decreases in efficiency.

Interest and Dividend Cover

Interest cover improved markedly between 20X1 and 20X2, falling back a little in 20X3 and 20X4, but is now below the 20X1 level, indicating increases in debt and/or interest rates. Dividend cover, however, after dropping below 20X1 levels for three years, has now recovered some lost ground. In both cases, cover was adequate, even at the lowest points; however, since there has been a substantial increase in gearing, interest cover ought to be watched carefully. Profits may be available to cover interest and dividends, but this must be matched by good cash flow.

Debt to Equity

Debt to equity fell in 20X2 but has steadily increased until, in 20X5, it was almost double its 20X1 level. Non-controlling interests appear to have remained a relatively insignificant element in the group's funding. It is more likely that debt has increased than that equity has decreased (for example, because of a purchase or redemption of own shares). Interest cover has fallen in line with this increase in borrowing as a proportion of long-term capital.

Liquidity

Both the current and the quick ratios have declined over the period, although in 20X2, they both improved. However, they have been fairly constant between 20X3 and 20X5 and are quite high, although comments on the adequacy of these ratios are of very limited utility in the absence of information about the company's activities and industry averages.

The reduction may have been planned to reduce the costs involved in maintaining high levels of inventory and allowing generous credit to customers. From the differential between the quick and current ratios, it would seem that inventory is a significant asset here. However, current liabilities must not be allowed to increase to the extent that current assets (and especially liquid assets) are insufficient to cover them, as this can lead to a liquidity crisis. Worsening liquidity ratios can be an indicator of overtrading, but this most often arises when expansion is funded from short-term borrowings whereas, here, new long-term capital in the form of debt appears to have been found.

Because working capital has fallen in size, it is now being used more efficiently, generating more sales from a reduced base. It would seem likely, given the slight fall in asset turnover, that non-current asset turnover has worsened considerably and that the improvement in working capital turnover has

compensated for this in calculating total asset turnover. It may be that long-term borrowings have financed capital expenditure which has not yet affected operations (an increase in the amount of non-current assets would decrease non-current asset turnover if turnover did not increase correspondingly).

Investors' Ratios

Earnings, dividends and net assets per share have all increased over the period. There has therefore been no need to increase dividends regardless of fluctuations in earnings.

The increase in net assets per share seems to indicate either that retained profits and borrowings have been used to increase capital expenditure or (less likely) that assets have been revalued each year.

Conclusion

The group would appear, from this superficial analysis, to be a steady performer but not expanding fast. This may be an advantage in times of recession: debt is probably not so high as to cause liquidity problems, nor have shareholders come to expect a high payout ratio. The possible recent expansion of non-current assets may help it to grow in future, as will its improved working capital management.

1.6 Valuation/Investor Ratios

5.1.5 Be able to calculate valuation ratios

Introduction

Valuation ratios are useful to investors deciding whether to invest further, keep, or sell an interest in the company. They are also useful tools in valuing business for acquisition or takeover. Ratios need to be considered in terms of the bigger picture of the company, its industry and competitors.

1.6.1 Return on Equity

The return on equity ratio is calculated as follows:

$$\text{Return on equity} = (\text{Net income attributable to ordinary shareholders} / \text{Equity shareholders' funds}) \times 100\%$$

Considerations

The return on equity ratio measures the percentage return that the company is generating on the book (or balance sheet) value of equity shareholders' funds invested in the business.

It is, therefore, a measure assessing profitability from the viewpoint of the owners of the business (the shareholders) and thus the return measure used in the ratio is the same as the earnings figure used in calculating EPS. The equity shareholders' funds figure used will consist of ordinary share capital plus the reserves of the business.

Example

$$\text{Return on equity} = (2,217 / 31,301) \times 100\% = 7.1\%$$

Potential Problems

This ratio suffers from one-off gains and losses introducing volatility into the earnings figure. For trend analysis, therefore, it may be better to strip out the post-tax impact of gains and losses recognised in the income statement that are considered to be non-recurring such as the 3,192 within administrative costs in the illustrative financial statements (in section 2.3.1).

The measurement of earnings and shareholders' funds is distorted by accounting policy choices (such as revaluations and recognition of development costs as an intangible asset) and therefore reduces comparability between different companies.

Analysis Points

Shareholders are looking for a rising trend of returns on equity in order to provide them with increasing levels of dividend income and/or growth in the share price.

Returns across different companies in the same sector can be compared but it should be noted that this ratio does not produce a yield or return on investment measure. To obtain such a number, it would be necessary to use the market value of equity as opposed to the book value (as used to calculate earnings yield).

1.6.2 Price/Earnings Ratio (P/E)

The Price/Earnings ratio is calculated as follows.

$$\text{Price/Earnings} = \text{Current market price per share} / \text{Earnings per share}$$

Considerations

The P/E ratio gives a market 'rating' or level of confidence for the company – how much is the stock market prepared to pay for the future earnings stream? A high P/E ratio indicates that the company's shares are more 'expensive' or that the market is more confident in the company's ability to generate the future income.

Example

If we take our current share price as £2.20 and our EPS figure as 12.37p, then the P/E ratio is:

$$\text{Price / Earnings} = 220 / 12.37$$

$$\text{Price / Earnings} = 17.78x$$

Potential Problems

The P/E ratio is difficult to use in isolation as a result of accounting choices distorting the profit measurement basis for different companies, even those operating in the same sectors. In addition, the globalisation of many industries now requires comparisons on a cross-border basis between companies reporting under different GAAP regimes. The resultant variability in reported profits can be large and the resultant P/E comparisons could be less meaningful.

In order to overcome these problems, various other measures of earnings are used by both analysts and, increasingly, companies to measure and analyse profit performance. These are discussed in more detail below.

Analysis Points

The significance of a P/E ratio can only be judged in relation to the ratios of other companies in the same type of business. If the median P/E ratio for an industry sector was 8, then a ratio of 12 for a particular company would suggest that the shares of that company were in great demand possibly because a rapid growth of earnings was expected. A low ratio (4, for example) would indicate a company not greatly favoured by investors, which probably has poor growth prospects.

1.6.3 Enterprise Value Multiples

The following earnings multiples measuring corporate performance are used frequently by analysts as an alternative to the P/E ratio.

$$\text{Enterprise value to EBIT} = \text{Enterprise value} / \text{Earnings before interest and tax}$$

$$\text{Enterprise value to EBITDA} = \text{Enterprise value} / \text{Earnings before interest, tax, depreciation and amortisation}$$

$$\text{Enterprise value to sales} = \text{Enterprise value} / \text{Revenue}$$

Considerations

These earnings multiples work in the same way as the P/E ratio, in that they compare a historic earnings or revenue figure to the market value of the business. Thus, the higher the multiple the more growth expectation is factored into market values and the more positively the company is viewed in relation to its peers.

However, the market value used in these ratios is not the market value of equity, which is used for the P/E ratio. Instead, the enterprise value (EV) is used, which is the market value of equity, including non-controlling interests and irredeemable preference shares, plus the market value of net debt, including redeemable preference shares (in other words, the value of the business to all providers of finance).

The rationale for using the EV is that this is a figure that is not distorted by the gearing of the business and, therefore, can be used to more directly compare companies with different financing strategies. Therefore, while the P/E ratio focuses only on earnings available to equity shareholders, EV multiples look at earnings available to all finance providers, being earnings before all dividends and before interest payments.

It is possible to use different earnings figures in the multiple, depending on which potential distorting factors need to be removed. Tax, for example, is distorted by the tax rules and rates in the countries in which profits are generated. Earnings performance is therefore distorted by the countries in which a company operates, making global comparisons more difficult. Thus, earnings figures used in EV multiples tend to be pre-tax.

It is also possible for companies to apply different rules on depreciation and amortisation of tangible and intangible non-current assets respectively, depending on the GAAP regime under which they report.

Therefore, many analysts and companies are turning to measures of earnings before interest and tax (EBIT) or before interest, tax, depreciation and amortisation (EBITDA). These measures are therefore used for the following reasons:

- To eliminate distortions caused by different financing structures, tax regimes, depreciation mechanisms and amortisation periods.
- To facilitate cross-border comparisons.
- To obtain an earnings figure that is closer to a cash measure (after adjustment for two major non-cash expenses, depreciation and amortisation).
- To calculate meaningful multiples for companies in high growth sectors, such as telecommunications and technology, where traditional P/E measures are not able to be calculated due to the businesses currently being loss-making.

There is a further measure, EV to sales, that is used mainly for companies in the early stages of growth and thus any form of profit figure tends to be relatively meaningless. By using sales, or revenue, as the historic measure of performance, all distortions to profit are stripped out. In addition, the calculation of sales will be very similar across almost all major reporting regimes.

Example

Assume that there is a charge of £14,500,000 for depreciation and £8,250,000 for amortisation included within the operating costs and that the book value of debt and preference shares as stated on the balance sheet is equivalent to its market value. The current share price is £2.20, making the market value of equity £39,435,000 (£2.20 x 17.925m shares).

Enterprise value is therefore calculated as follows.

	(£'000)
Market value of equity	39,435
Market value of debt and preference shares (= book value) (1,356 + 1,016 + 16,942 + 137 + 837)	20,288
Less: Cash and liquid investments (6,425 + 3,926)	(10,351)
Enterprise value	49,372

$$\text{Enterprise value to EBIT} = 49,372 / (3,673 + 3,176 - 303) = 7.54x$$

$$\text{Enterprise value to EBITDA} = 49,372 / (3,673 + 3,176 - 303 + 14,500 + 8,250) = 1.69x$$

$$\text{Enterprise value to sales} = 49,372 / 135,761 = 0.36x$$

Potential Problems

The following problems may arise when using EV multiples:

- It may appear that a company with a high EV multiple is successful and profitable, when in fact at the post-tax level it may be loss-making.
- EBITDA as a measure ignores important real costs associated with running a business. Both depreciation and amortisation represent assets being used up in the business and ignoring them both can lead to misleading results. Tax is also a real cost and a cash outflow for companies.
- EV to sales is a measure that can be influenced by companies entering into barter transactions with the intention of increasing the sales figure, reducing the size of the multiple and thus appearing to be better value (or alternatively prompting an upward rerating of the share price).

Analysis Points

EV multiples should be analysed in the same way as P/E multiples to compare different companies within the same sector. Therefore, the same comments can be made, and conclusions drawn, as were discussed for the P/E ratio.

1.6.4 Earnings Yield

The earnings yield expresses the most recent earnings per share as a percentage of the current market price as follows:

$$\text{Earnings yield} = (\text{Earnings per share} / \text{Current market price per share}) \times 100\%$$

Example

$$\text{Earnings yield} = (12.37 / 220) \times 100\%$$

$$\text{Earnings yield} = 5.62\%$$

Analysis Points

The earnings yield is the inverse of the P/E ratio, hence similar comments apply. If the median earnings yield for an industry sector was 10%, then a yield of only 6% for a particular company would suggest that the shares of that company were in great demand, possibly because a rapid growth of earnings was expected. A higher yield, say 18% for example, would indicate a company not greatly favoured by investors which probably has poor growth prospects.

In practice, the earnings yield is used less frequently than the P/E ratio.

1.6.5 Dividend Yield

The dividend yield of an ordinary share is calculated as follows.

$$\text{Dividend yield} = (\text{Dividend per share} / \text{Current market price per share}) \times 100\%$$

Example

$$\text{Dividend yield} = (6.25 / 220) \times 100\%$$

$$\text{Dividend yield} = 2.84\%$$

Analysis Points

A high dividend yield implies that the company is paying reasonable levels of income but is not particularly highly regarded for its growth prospects and vice versa. If the figures show a high yield then the share price is relatively low, implying that the main factor attracting shareholders to the company is the reasonably high current level of income. Investors who believe that the company has good growth prospects would buy the share, driving the price up and reducing the yield.

It is therefore also true that companies with high P/E ratios tend to have low dividend yields and vice versa.

1.6.6 Dividend Cover

Dividend cover is used as an attempt to assess the likelihood of the existing dividend being maintained. The dividend cover is calculated as follows:

$$\text{Dividend cover} = \text{Earnings per share} / \text{Net dividend per share}$$

Example

$$\text{Dividend cover} = 12.37 / 6.25$$

$$\text{Dividend cover} = 1.98x$$

Analysis Points

An unusually high dividend cover implies that the company is retaining the majority of its earnings, presumably with the intention of reinvesting to generate growth.

A company may alternatively pay a larger dividend than the year's earnings, in which case it is drawing on past reserves and is said to be paying an uncovered dividend.

1.6.7 Net Asset Value/Net Assets Per Share

The net asset value or net assets per share is calculated as:

$$\text{Net asset value} = \text{Net assets attributable to ordinary shareholders} / \text{Number of ordinary shares in issue}$$

Considerations

The net asset value represents the intrinsic worth of the shares in terms of the net assets that support that value. This could show an unrealistically low figure in terms of current worth if a strict policy of historical cost accounting has been applied. The shareholder may be more interested in the asset values if the company adopts a policy of revaluation.

Example

$$\text{Net asset value} = (£32,138 - £837) / 17,925$$

$$\text{Net asset value} = £31,301 / 17,925$$

$$\text{Net asset value} = £1.75$$

Note that the net assets figure is after deducting those due to the preference shareholders.

While the company continues to trade, the net assets per share (which reflects the book value) might be considerably higher or lower than the market value of those shares. This is because investors do not think that all of the assets will be sold and they are basing the value of the company on its ability to generate returns using those assets. The 'asset backing' tends to become more significant in the event of a potential takeover. It is also of regular concern to property companies and investment trusts.

1.7 Limitations of Analysis

5.1.6 Understand the limitations of ratios and reliance on historical data for financial analysis

Introduction

None of the ratios we have described in this chapter have hard and fast definitions, hence there is no right answer to a question such as 'what is the return on capital employed?' It could depend on how you treat bank overdrafts, and so on.

Despite this, ratios do provide a useful tool. We can calculate the ratios and, with the aid of useful comparatives that are essential for this process, we can look for trends or discontinuities from one year to the next.

Always remember, however, that the ratio is not the answer in itself, simply a tool to help us identify important factors. For example, has the return on capital employed gone up because the return has gone up or because the capital employed has gone down? They clearly imply different things about the company.

When carrying out an analysis exercise there are a number of factors we need to consider.

Who is the Information For?

We need to satisfy the requirements of our clients and hence concentrate on those areas that are of concern to them. If, for example, our client is a shareholder, then we would probably concentrate initially on the investors' ratios.

However, we should never adopt a blinkered approach to analysis. When looking at an investors' ratio we may consider, for example, the earnings per share figure. The earnings per share figure clearly depends on the profits and the number of shares. If the earnings per share figure is changed because profits have changed, we may well wish to go and consider further the profitability of the business. Hence our client tells us the starting point for our analysis, but we should be prepared to be taken off in different directions depending on what we find being highlighted by the ratios we initially consider.

Apply What you Know About the Specific Business or Industry

In order to appreciate and understand the trends and ratios we are seeing, we need to consider the practical circumstances of the business.

Profitability

How did the business make its profits? Is it a 'stack 'em high, sell 'em fast', high volume, low margin retailer or is it a high margin, low turnover business, such as a jeweller?

What is the nature of the earnings and the dependency of those earnings on economic factors such as exchange rates, the general state of the economy and recession. For example, supermarkets largely provide necessities, hence in a recession we would expect their profits to remain fairly level. However, for luxury car manufacturers, we would expect their profits to decline substantially in a recession as demand for their goods drops.

Liquidity

In considering the liquidity of the business under consideration we should try to imagine its working capital cycle. We should try to picture in our minds what we expect to see or what we can see as the norm by considering the working capital cycle of the peer group. In this way we will be in a decent position to comment on what we are actually finding in the company under consideration.

Accounting Policies

The accounting policies adopted by any company can significantly impact on its ratios.

If we revalue non-current assets, then our depreciation charge will be higher. Hence, profits will be lower, but on the balance sheet, more non-current assets means a higher capital employed figure. Hence, our return on capital employed will be reduced (lower profits divided by higher capital employed).

If we are comparing two companies, one that does revalue non-current assets and one that does not, or if we are comparing one company to a previous year when we have revalued non-current assets in between, then we would expect to see a distortion between the ratios as a result of this accounting policy.

Accounting policies and estimates can have significant impacts on ratios.

	Impact on earnings per share	Impact on profit before interest	Impact on capital employed	Impact on return on capital employed
Revaluation of PPE	Higher depreciation therefore lower earnings EPS falls	Higher depreciation therefore lower profit before tax	Higher asset value increases capital employed	Lower ROCE
Increasing an asset's useful life	Lower depreciation gives higher earnings EPS rises	Higher profit before interest	Higher capital employed since lower depreciation gives higher net book value	Uncertain

1.7.1 Window Dressing

Window dressing techniques incorporate some dubious financing methods, hence they are worthy of consideration here.

Window dressing transactions are transactions intended to mislead the user of the accounts. We outline below two basic window dressing transaction types.

Circular Transactions

In a circular transaction, Company A sells goods to Company B who in turn sells them back to Company A. The purpose of undertaking these transactions is simply to boost reported revenue, which in turn would boost such measures as asset turnover, distorting the view of the user as to the effectiveness of the management of the company.

Clearly, such a transaction is totally fictitious. It is likely that the transactions would have to be disclosed as a result of the rules in IAS 24 Related Party Disclosures, assuming that the two companies are in some way connected.

Bed and Breakfast Transactions

A bed and breakfast transaction is very much like a circular transaction that is undertaken over a year end, ie, Company A sells to Company B before the year end, then repurchases after the year end. This will not only boost Company A's revenue for the year but also their reported profits if the goods have been sold at a profit.

Again, the transaction is totally fictitious and only designed to mislead the user of the account. As above, the transactions are likely to be disclosed as being with a related party.

1.7.2 Possible Distorting Effects

When calculating any ratio, we should always try to look for possible distorting effects that impact on our analysis. Factors to consider would be as follows.

Comparing a Full Year's Transactions to Year-End Balances

One of the biggest possible distortions that is only tackled in the earnings per share calculation as a matter of course, is that we compare a full year's worth of transactions to a year-end balance sheet figure with a number of the ratios. What we really should be doing is comparing a full year's transactions to a representative balance throughout the year. For example, ideally we should compare the full year's profits to a representative amount of capital employed to get return on capital employed.

When analysing a set of financial statements, it is highly unlikely that you will be able to calculate the representative amount of capital employed at a number of times throughout the year, hence you may only be able to work out the return on capital employed based on start of the year or end of the year capital employed figures and use a crude average.

The problem is not only confined to return on capital employed, it is true for any ratio that compares a full year's transaction to a year-end figure, for example receivables' collection period, payables' payment period or inventory turnover rate. Hence, these ratios can be distorted by such things as:

- **Subsidiary acquired near year end** – profits up only from the date of acquisition, capital up at the year end by the full amount.
- **Funds raised near year end** – capital employed higher, return increased by only a small amount based upon what the funds have managed to generate in the short period of time to year end.
- **Seasonal sales** – the receivables' collection period compares the year-end receivables to the year's sales. If sales are seasonal in nature then, depending on when the year end is, the receivables may be very significant or very small compared to the year's revenue.

Comparing Like With Like

All of our ratios should endeavour to compare like with like. For example, when considering the payables' payment period, we should try to compare the invoiced payables to the invoiced cost of sales. When calculating profit margins, we should compare the profit to the revenue that has generated that profit.

We should, therefore, always be looking for factors that cause any distortions in these ratios. For example, income from associated undertakings boosts the profits before tax, however, it has no revenue implications and therefore a simple calculation of profit margins based on profits before tax and revenue will incorporate a distorting effect.

The method of equity accounting for associates on the balance sheet will similarly distort any asset turnover calculation since this particular element of capital employed does not contribute to revenue. When considering any ratio, the aim should always be to compare like with like.

1.7.3 Ability to Realise Assets

When considering any ratios, in particular liquidity, it may be very difficult for us to get any indication as to the potential ability to realise assets.

Cash

We would normally assume that we can get hold of any cash immediately. However, it is quite possible that a company may have significant amounts of cash held overseas that it cannot remit to the UK for certain reasons particular to the country concerned. Alternatively, a proportion of the cash a company is in possession of may not be freely available for its own use to repay debts. For example, a manufacturer may have received cash in advance that can only be used to fund a specific project and is not available to settle other debts. Also, cash could be tied up because of collateral pledges or restricted under bank covenants.

Inventory

Inventory is shown on the balance sheet under the heading current assets, which leads to the reasonable assumption that it is likely to be converted into cash within 12 months. However, this may not always be the case. In such industries as high technology or fashion, inventory may become unsaleable very rapidly. The financial statements give no indication as to what the inventory is to enable you to assess any potential problems regarding realisation.

2. Analysis Considerations

2.1 Other Sources of Information

5.2.1 Know other sources of information that may be relevant in assessing an entity's performance and financial position

The financial statements are one source of information for financial analysis and trends. The limitations of using ratios and historic information are outlined in this chapter. Historic information is not necessarily a predictor of future performance and accounting policies and availability of data can distort trends.

Other sources of information that may be relevant in assessing a business's prospects include publicly available information and internal information, if the analyst is allowed access to that information. Internal information includes management and cash forecasts, sales budgets and strategy. External, publicly available, information includes industry information, macro-economic trends, disclosures required by regulatory authorities and the directors' report and management commentary in the annual report.

Accounting policies can have an impact on the analysis and interpretation of financial statements and an entity's performance and financial position. Therefore, reading the accounting policy note (usually note 1 – the first note in the financial statements) can provide some insights on accounting treatment, which may differ from other, similar organisations. Revenue recognition was mentioned in chapter 1, and revaluation policies and depreciation rates should also be considered.

2.2 Other Tools of Interpretation

5.2.2 Understand the tools for analysis including: trend statements; common size statements; multivariate analysis

2.2.1 Trend Statements

Trend statements are more commonly prepared for income statement information by choosing one year as the base year and expressing similar items of other years as a percentage of that base year.

Example

We are given the following five-year summary information for a company.

	20X6 (£'000)	20X7 (£'000)	20X8 (£'000)	20X9 (£'000)	20Y0 (£'000)
Revenue	800	880	1,040	1,280	1,600
Gross profit	90	100	110	150	190
Profit before tax	40	46	52	90	130
Dividends	4	5	6	9	15

We may prepare a trend statement for these five years with the 20X6 figures taken as 100% as follows.

	20X6 %	20X7 %	20X8 %	20X9 %	20Y0 %
Revenue	100	110	130	160	200
Gross profit	100	111	128	167	211
Profit before tax	100	115	130	225	325
Dividends	100	125	150	225	375

This is a useful approach when analysing performance from the five-year summary as it provides a convenient way of presenting data for a large number of years, and can be helpful in highlighting trends. In the above example, we can see that as revenue doubles, profit before tax more than trebles, indicating a reasonable degree of fixed costs since they have not increased in line with the increase in revenue.

Alternatively, when presented with data in this form it is sometimes useful if we recompute each individual year's movement as compared with the previous year.

Example

We are presented with the following trend data for the sales of two companies, A and B, over a five- year period.

	20X6 (%)	20X7 (%)	20X8 (%)	20X9 (%)	20Y0 (%)
A	100	110	130	160	200
B	100	150	210	240	250

If we restate this data in terms of the increase in sales achieved by each company we would show:

	20X7	20X8	20X9	20Y0
A	+10%	+18%	+23%	+25%
B	+50%	+40%	+15%	+4%

The trend statement indicated that, to each year, it would be correct to state that Company B had expanded sales more rapidly than Company A since 20X6. On the other hand, the data on the increase in sales each year indicate that the rate of increase in sales is on the rise for Company A and on the decline for Company B, with the former company now increasing sales at a much faster rate.

Thus, both types of analysis can give us a useful insight when we are analysing performance over a number of years.

2.2.2 Common Size Statements

A common size statement expresses the amounts of successive years as a proportion of one figure in the accounts. Such statements are normally prepared in relation to the balance sheet, relating each amount to the balance sheet totals in any given year thus facilitating analysis of changes between years.

Example

We are provided with the following data in relation to a company.

	20X6 (£'000)	20X7 (£'000)	20X8 (£'000)	20X9 (£'000)	20Y0 (£'000)
Total assets					
Non-current assets	180	240	250	280	310
Current assets	175	185	220	300	370
	355	425	470	580	680
Financing					
Share capital	100	100	100	150	150
Reserves	50	79	110	166	241
Shareholders' funds	150	179	210	316	391
Loans	60	100	100	80	80
Current liabilities	145	146	160	184	209
	355	425	470	580	680

From this, we can prepare the following common size statement taking each figure as a percentage of total assets.

	20X6 (%)	20X7 (%)	20X8 (%)	20X9 (%)	20Y0 (%)
Trading assets					
Non-current assets	51	56	53	48	46
Current assets	49	44	47	52	54
	100	100	100	100	100

Financing					
Share capital	28	24	21	26	22
Reserves	14	18	23	28	35
Shareholders' funds	42	42	44	54	57
Loans	17	24	21	14	12
Current liabilities	41	34	35	32	31
	100	100	100	100	100

This is a valuable tool for identifying changes in the way in which assets employed are financed and the breakdown of the assets employed.

In this example, we can now more readily identify the relative decline in the level of non-current assets and the impact on gearing of the raising of a loan in 20X7 and the issue of shares, which is partly used to repay the loans in 20X9.

2.2.3 Multivariate Analysis

One way of using ratios is to identify several ratios that reflect on a particular aspect of a business and produce a single, combined, 'multivariate' ratio that represents some kind of weighted average.

Most research in this field has focused on identifying liquidity problems, using ratios to identify companies that will have problems in meeting their obligations.

One example of multivariate ratio analysis is the 'Z score' system. This is a composite ratio calculation derived by Altman (1968) which is designed to assess the solvency of a particular company. Depending on the number calculated by the formula, its 'Z score', a conclusion could be reached on the likelihood of bankruptcy. Altman's Z score is worked out as follows (with weightings applied to the ratios A to E):

$$Z = 1.2A + 1.4B + 3.3C + 0.6D + 1E$$

Each of the letters in the formula represents a different financial ratio:

- A = net working capital/total assets
- B = retained earnings/total assets
- C = earnings before interest and tax (EBIT)/total assets
- D = shareholders' equity/total liabilities
- E = sales/total assets

The results can be interpreted as follows:

Z score < 1.8; bankruptcy is predicted

Z score > 1.8 but < 3; the position is unclear (ie, a grey area) Z score > 3; the company is safe with no risk of bankruptcy

The ratios A to E are deemed to provide an insight into a company's solvency.

- **Net working capital/total assets** – working capital is calculated by deducting current liabilities from current assets. The higher this ratio is, the greater the working capital, and thus the greater the balance sheet liquidity. The current ratio or quick ratio gives a similar measure of liquidity. High balance sheet liquidity lowers the bankruptcy risk.
- **Retained earnings/total assets** – the higher the level of retained earnings, the greater the 'creditors' buffer' and thus the lower the bankruptcy risk.
- **EBIT/total assets** – an indicator of profitability and efficiency. Making a reasonable return should make a business more able to meet the demand of creditors. Altman accords this ratio the highest weighting in his formula. A profitable business is more likely to survive going forward.
- **Shareholders' equity/total liabilities** – how does the shareholders' investment in the company compare to the amount owed by the business? The greater the proportion of shareholders' equity, the lower the bankruptcy risk.
- **Sales/total assets** – this is the asset turnover ratio, which is a measure of efficiency. Are the assets of the business productive in generating revenue? Higher capital efficiency lowers bankruptcy risk.

It is worth mentioning here that models like the Altman's Z-score, although originally meant to predict failure of an organisation, are largely being used as measures of financial strength. Such failure prediction models may be utilised as risk measures in many different contexts.

Example

The following is extracted from the accounts of Whiskey plc:

	20X2 (£m)	20X1 (£m)
Revenue	123	220
Profit before interest and tax	24	43
Working capital	48	72
Total assets	135	155
Total liabilities	97	123
Retained earnings	25	27
Shareholders' equity	60	52

Calculate and interpret the Z score for Whiskey plc in 20X2 and 20X1.

Solution

	Weights	20X2	20X1
Net working capital/total assets	1.2	0.43	0.56
Retained earnings/total assets	1.4	0.26	0.24
Earnings before interest and tax/total assets	3.3	0.59	0.92
Shareholders' equity/total liabilities	0.6	0.37	0.25
Sales/total assets	1.0	0.91	1.42
Z score		2.56	3.39

The Z score indicates that the company's financial position has changed from a safe position in 20X1 to a possible bankruptcy risk in 20X2. This deterioration has been driven by a worsening of the efficiency of the business, with lower levels of revenue and profit being generated from the asset base. This is demonstrated by the increases in the asset turnover ratio (sales / total assets) and in EBIT/total assets ratio.

2.3 Liquidity Ratios

5.2.3 Understand the use of prior year financial statements, forecasts, accounting policies, financial statements of competitors and industry averages in assessing an entity's performance and financial position

This learning objective has been addressed throughout this chapter, and you should now have a comprehensive understanding of how to use ratios and other tools to analyse the financial performance and position of a company.

2.3.1 Appendix

Illustrative Financial Statements Used in Exercises

Balance Sheet as at 31 December	(£'000)	(£'000)
Non-Current Assets		
Intangible		3,926
Property, Plant and Equipment (PPE)		18,731
Investments		842
		23,499
Current Assets		
Inventory	19,420	
Trade Receivables	21,753	

Other Receivables	6,129	
Investments	3,926	
Cash	6,425	
		57,653
Total Assets		81,152
Non-Current Liabilities		
Loans	(1,356)	
Lease Liability	(1,016)	
Deferred Tax	(1,484)	
Provision for Reorganisation Costs	(589)	
		(4,445)

Balance Sheet as at 31 December	(£'000)	(£'000)
Current Liabilities		
Bank Overdraft	(16,942)	
Lease Liability	(137)	
Trade Payables	(18,702)	
Tax	(1,625)	
Others	(6,260)	
		(43,666)
Net Assets		33,041
£1 Ordinary Shares		17,925

Preference Shares		837
Share Premium		2,455
Revaluation Reserve		2,681
Retained Earnings		8,240
		32,138
Non-controlling interest		903
Shareholders' Funds		33,041

Income Statement for the Period Ended 31 December	(£'000)
Revenue	135,761
Cost of sales	(83,604)
Gross profit	52,157
Distribution costs	(22,961)
Administration costs	(22,712)
Profit from operations	6,484
Income from associate	62
Interest receivable	303
Interest payable	(3,176)
Profit before taxation	3,673
Tax	(1,164)
Profit after taxation	2,509
Non-controlling interest	(208)

Preference share dividends	(84)
Profit attributable to the group	2,217
Dividends – Ordinary	1,120
Earnings per share	12.37p
Dividend per share	6.25p

Last year, the earnings per share was quoted as 12.43p. Included in administration costs is a non-recurring expense of £3,192,000.

2.3.2 Ratios Summary

Profitability ratios

$$\text{ROCE} = \frac{\text{Profit from operations} + \text{Interest receivable and other income receivable}}{\text{Capital employed}} \times 100\%$$

$$\text{Profit margin} = \frac{\text{Profits}}{\text{Revenue}} \times 100\%$$

$$\text{Asset turnover} = \frac{\text{Revenue}}{\text{Assets (capital) employed}}$$

$$\text{Operational gearing ratio} = \frac{\text{Revenue} - \text{Variable costs}}{\text{Profit}}$$

Liquidity ratios

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current liabilities}}$$

$$\text{Quick ratio} = \frac{\text{Current Assets} - \text{Inventory}}{\text{Current liabilities}}$$

$$\text{Inventory turnover} = \frac{\text{Cost of sales}}{\text{Inventory}}$$

$$\text{Receivables' collection period} = \frac{\text{Trade receivables}}{\text{Revenue}} \times 365 \text{ days}$$

$$\text{Payables' payment period} = \frac{\text{Trade payables}}{\text{Cost of sales}} \times 365 \text{ days}$$

Capital structure

$$\text{Debt to equity} = \frac{\text{Interest-bearing loans} + \text{Preference share capital}}{\text{Equity shareholders' funds}} \times 100\%$$

$$\text{Net debt to equity} = \frac{\text{Debt as above} - \text{Cash and current asset investments}}{\text{Equity shareholders' funds}} \times 100\%$$

$$\text{Lenders' debt to equity} = \frac{\text{Total borrowings (including non-interest-bearing debt)}}{\text{Total shareholders' funds (including preference shares)}} \times 100\%$$

$$\text{Interest cover} = \frac{\text{Profit from operations} + \text{Interest receivable} + \text{Other income receivables}}{\text{Interest payable}}$$

$$\text{Asset cover} = \frac{\text{Total assets} - \text{Current liabilities}}{\text{Loans payable}}$$

$$\text{EPS} = \frac{\text{Net profit/loss attributable to ordinary shareholders}}{\text{Weighted average number of ordinary shares outstanding during the period}}$$

$$\text{Return on equity} = \frac{\text{Earnings attributable to ordinary shareholders}}{\text{Equity shareholders' funds}} \times 100\%$$

$$\text{Price/Earnings} = \frac{\text{Current market price per share}}{\text{Earnings per share}}$$

$$\text{Enterprise value to EBIT} = \frac{\text{Enterprise value}}{\text{Earnings before interest and tax}}$$

$$\text{Enterprise value to EBITDA} = \frac{\text{Enterprise value}}{\text{Earnings before interest, tax, depreciation and amortisation}}$$

$$\text{Enterprise value to sales} = \frac{\text{Enterprise value}}{\text{Revenue}}$$

$$\text{Earnings yield} = \frac{\text{Earnings per share}}{\text{Current market price per share}} \times 100\%$$

$$\text{Dividend yield} = \frac{\text{Dividend per share}}{\text{Current market price per share}} \times 100\%$$

$$\text{Dividend cover} = \frac{\text{Earnings per share}}{\text{Net dividend per share}}$$

$$\text{Net asset value} = \frac{\text{Net assets attributable to ordinary shareholders}}{\text{Number of ordinary shares in issue}}$$

End of Chapter Questions

Think of an answer for each question and refer to the appropriate section for confirmation.

1. Company A has the following balance sheet:

Balance sheet	£'000
Assets	
Non-Current Assets	180
Current Assets	64
Liabilities	
Non-Current Liabilities (provisions and borrowings)	(55)
Current Liabilities (trade and other payables and borrowings of £8,000)	(41)
Net assets	148
Equity	
Share Capital	32
Reserves	116
	148

Company A's operating profit for the year is £22,300 and it has no interest receivable.

Calculate Company A's ROCE and describe any limitations of using this ratio.

Answer reference: Section 1.2

2. Company B and Company C are supermarkets. Extracts from their income statements are below:

	Company B	Company C
Revenue	2,345,000	9,600,000
Cost of sales	(1,893,000)	(9,240,000)
Gross profit	452,000	360,000

Calculate the gross profit margin and provide examples of why the ratios are different for the two companies.

Answer reference: Section 1.2

3. Some initial analysis has been performed for two companies, Company D and Company E, in the same industry:

	Company D	Company E
Current ratio	4.5	1.2
Quick ratio	1.1	0.9

What can you determine from these ratios, without any further information being yet available?

Answer reference: Section 1.3

4. Explain why the cash flow statement is a useful source of information when performing financial analysis of a company.

Answer reference: Section 1.3

5. Company F has the following balances for the current year and prior year:

Extracts from income statement	Current year (£)	Prior year (£)
Revenue	346,000	283,000
Cost of sales	(259,000)	(201,000)
Gross profit	87,000	82,000
Extracts from balance sheet		
Receivables	122,000	62,000
Trade payables	44,000	50,000

Calculate receivables and payables days for both years and analyse the consequences of any movements in the ratios.

Answer reference: Section 1.4

6. You are analysing Company G's financial statements.

Extract from balance sheet	Current year (£)	Prior year (£)
Non-current assets	73,000	54,000
Current assets		
- Inventory	18,700	16,500
- Trade receivables	21,900	19,700
- Cash	34,300	19,200
Total assets	147,900	109,400
Current liabilities		

Extract from balance sheet	Current year (£)	Prior year (£)
- Trade payables	11,200	9,300
- Overdraft	17,500	4,700
- Lease liability	5,000	5,000
- Tax liability	500	400
Non-current liabilities		
- Loan	20,100	15,600
- Lease liability	8,800	9,400
Total liabilities	63,100	44,400
Share capital	50,000	45,000
Retained earnings	34,800	20,000
Total equity	84,800	65,000

Calculate the gearing ratio using the formula of debt/equity.

Answer reference: Section 1.5

7. Using the information for Company G in question 6, calculate the gearing ratio using net debt/equity and comment on reasons for any differences to your answer in question 6.

Answer reference: Section 1.5

8. You are analysing Company H in relation to its competitors and industry. Data has been extracted from financial statements and industry averages:

	Company H	Competitor	Industry average
Share price	£10.03	£18.23	
Earnings per share	£1.09	£2.11	
P/E ratio			8.8x

Calculate the Price/Earnings (P/E) ratio for Company H and its competitor. Comment on the market sentiment for Company H.

Answer reference: Section 1.6

9. Company J decides to revalue its buildings within its non-current assets to their current market value which is higher than the book value. What impact will this have on the following ratios:
- ROCE
 - Gearing

Answer reference: Section 1.7

10. What are the benefits of using trend statements or common size statements in financial analysis?

Answer reference: Section 2.2

The background of the page is a complex, abstract digital pattern. It features a dense field of binary digits (0s and 1s) in white and light blue, set against a dark blue and black background. Interspersed among the digits are numerous small, glowing red squares and lines, creating a sense of depth and movement. The overall effect is reminiscent of a data stream or a digital landscape.

Glossary

Accrued Income

Revenue earned but not yet received in cash.

Amortisation

The systematic allocation of the depreciable amount of an intangible asset over its useful life. It is like depreciation for intangible assets and represents the using up of the asset over the period of time it is expected to be used.

Asset

A resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity.

Associate

An entity over which the investor has significant influence but not control.

Bonds

Securities issued by an organisation, such as a government or corporation. Bonds pay regular interest and repay their principal at maturity.

Bonus Issue

The free issue of new ordinary shares to a company's existing shareholders, in proportion to their existing shareholding.

Business Combination

A transaction where an acquirer obtains control of one or more businesses. This includes mergers and acquisitions.

Capital Expenditure

Investment in long-term assets of a company that results in a non-current asset being recognised on the statement of financial position. Money spent to acquire or improve a non-current asset.

Carrying Amount

The amount at which an asset is recognised after deducting accumulated depreciation and accumulated impairment losses. Also known as the book value.

Cash

Comprises cash on hand and demand deposits.

Cash Equivalents

Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and subject to an insignificant risk of changes in value.

Cash Flows

Cash flows are inflows and outflows of cash and cash equivalents.

Consolidated Accounts

Consolidated financial statements are those of a group in which the assets, liabilities, equity, income and expenses, and cash flows of the parent and its subsidiaries are presented as those of a single economic entity.

Control

Control is the exposure, or rights, to variable returns from an entity's involvement with its investee. The investor has the ability to affect those returns through its power over the investee.

Convertible Bonds

Bonds which are convertible, usually at the investor's choice, into a certain number of the issuing company's ordinary shares.

Convertible Preference Shares

Preference shares which are convertible, usually at the investor's choice, into a certain number of the issuing company's ordinary shares.

Costs to Sell

The incremental costs directly attributable to the disposal of an asset, excluding finance costs and income tax expense.

Current Assets

Assets that are expected to be realised, sold or consumed within 12 months of the year-end date or within the company's operating cycle. Also covers assets held for trading and cash.

Current Liabilities

Liabilities expected to be settled within 12 months of the year-end date or within the company's operating cycle. Also covers liabilities held for trading.

Deferred Income

Cash received for goods or services but not yet earned.

Depreciation

The systematic allocation of the depreciable amount of an asset over the period of time it is expected to be used.

Derivatives

Financial instruments where the price or value of the contract is derived from other underlying assets such as interest rates or foreign exchange rates. Examples include options, futures and swaps.

Disallowed Expenses

Disallowed expenses are those expenses that are deducted to arrive at accounting profit but may not be deducted in arriving at taxable profit.

Dividend

Distribution of profits by a company to shareholders.

Equity

The residual interest in the assets of the entity after deducting all of its liabilities.

Equity Method

A method of accounting whereby the investment is initially recorded at cost and adjusted thereafter for the post-acquisition change in the investor's share of investee's net assets. The investor's profit or loss includes its share of the investee's profit or loss and the investor's other comprehensive income includes its share of the investee's other comprehensive income.

Fair Value

The price that would be received to sell an asset or paid to transfer a liability in an orderly, arm's length transaction between market participants at the measurement date.

Fair Value Through Other Comprehensive Income (FVTOCI)

A financial instrument classified as such because of its characteristics that are measured at fair value at each reporting date with movements taken to other comprehensive income.

Fair Value Through Profit or Loss (FVTPL)

A financial instrument classified as such because of its characteristics that are measured at fair value at each reporting date with movements taken to the income statement.

Financing Activities

Financing activities are issues of (cash receipts) or repayments of (cash payments) debt or equity.

Goodwill

An asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognised.

Identifiable

An asset is identifiable if it is separable or arises from contractual or other legal rights. Separable means it can be separated from the entity and sold individually.

Impairment Loss

The amount by which the carrying amount of an asset exceeds its recoverable amount.

Income

Income represents increases in economic benefits during the accounting period, in the form of inflows or enhancements of assets or decreases of liabilities, that result in an increase in equity, other than those relating to contributions from equity participants.

Intangibles

Intangibles are identifiable non-monetary assets without physical substance.

Investing Activities

Investing activities (as presented in the cash flow statement) are the acquisition and disposal of long-term assets and other investments not included in cash equivalents.

Joint Control

Contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

Lease

A contract that conveys the right to use an asset for a period of time in exchange for payment.

Lease Term

The non-cancellable period for which a lessee has the right to use an underlying asset, together with both:

- periods covered by an option to extend the lease if the lessee is reasonably certain to exercise that option, and
- periods covered by an option to terminate the lease if the lessee is reasonably certain not to exercise that option.

Liability

A present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits.

Maturity

The date on which the principal on a bond is repaid.

Non-Controlling Interest (NCI)

Equity in a subsidiary not attributable, directly or indirectly, to a parent.

Non-Current Assets

Tangible, intangible and financial assets of a long-term nature.

Non-Current Liabilities

Liabilities where the obligation to settle is longer than 12 months from the year-end date.

Operating Activities

In a cash flow statement, operating activities are the principal revenue-producing activities of the entity and other activities that are not investing or financing activities.

Overtrading

Overtrading is conducting more business than can be supported by a company's financing and working capital.

Parent

An entity that controls one or more entities.

Performance Obligation

A promise in a contract with a customer to transfer either goods or services to the customer.

Preference Shares

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 if the company is wound up in a liquidation of assets insolvency.

Property, Plant and Equipment (PPE)

PPE are tangible items that are held for use in the production or supply of goods and services, for rental to others, or for administrative purposes, and are expected to be used during more than one year.

Recoverable Amount

The higher of an asset's fair value less costs to sell and its value in use.

Revenue Expenditure

Payments for goods or services which are consumed by the company and for which the expenditure is shown in profit or loss. This includes short-term expenses such as rent, salaries and electricity.

Right-of-use Assets

Assets that the lessee has the right to use.

Rights Issue

The issue of new ordinary shares to a company's existing shareholders, in proportion to their existing shareholding, at a price that is discounted compared to the current market price.

Share Capital

The nominal value of a company's issued ordinary shares.

Significant Influence

The power to participate in the financial and operating policy decisions of the investee but without control or joint control over those policies.

Subsidiary

A subsidiary is an entity that is controlled by another entity.

Transaction Price

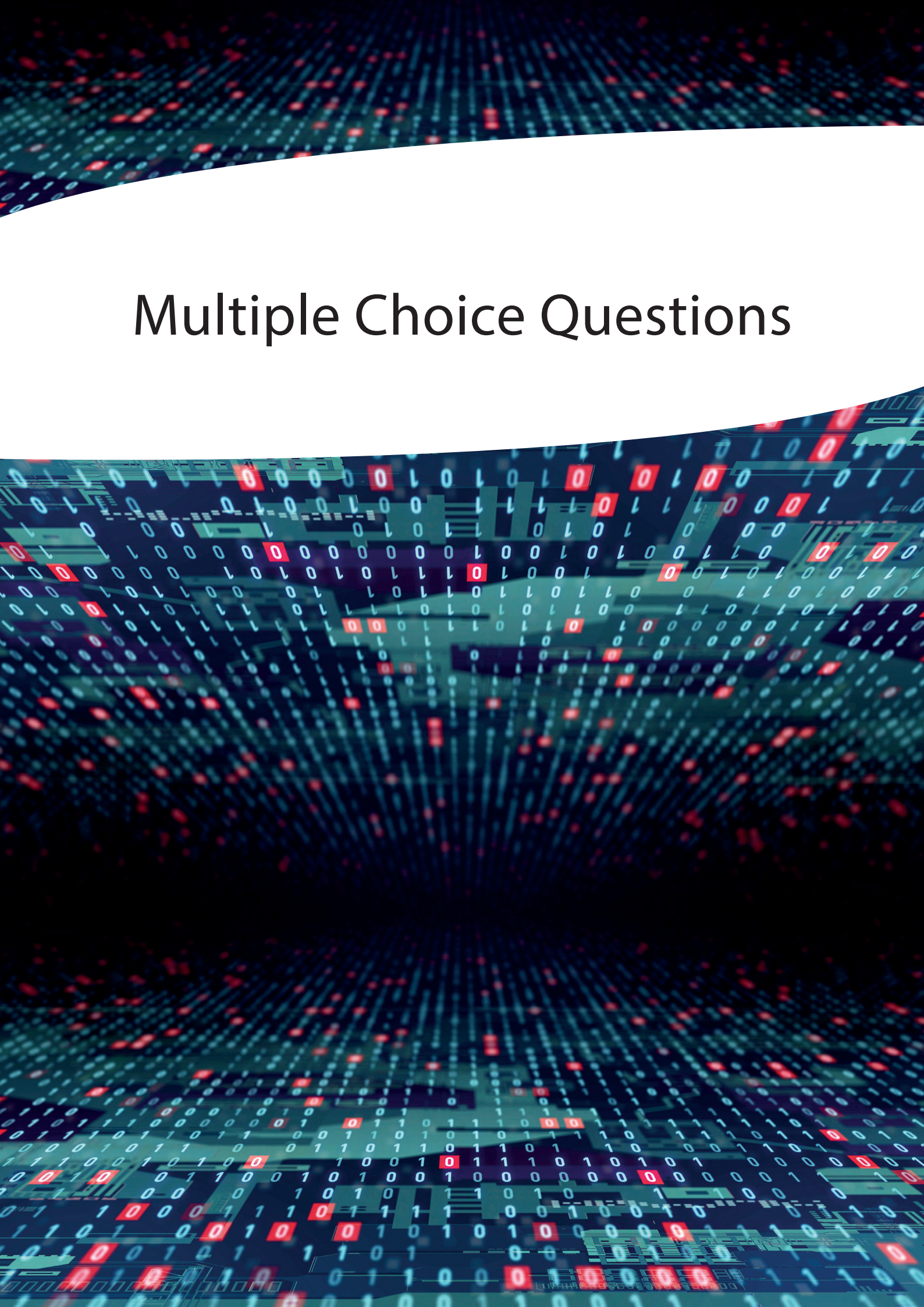
Transaction price is the amount of consideration to which an entity expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties (IFRS 15).

Value in Use

The present value of future cash flows expected to arise from an asset.

Warrants

Options to buy shares.

The background of the slide is a complex, abstract digital pattern. It features a dense field of binary digits (0s and 1s) in white and light blue, set against a dark blue and black background. Interspersed among the digits are numerous small, glowing red and blue squares, some of which are slightly offset from the main grid, creating a sense of depth and movement. The overall effect is reminiscent of a data stream or a digital landscape.

Multiple Choice Questions

The following questions have been compiled to reflect as closely as possible the standard that you will experience in your examination. Please note, however, they are not actual exam questions.

1. **An analyst is looking at the financial performance of a company over the last five years, with Y1 being the base year and Y5 being the current year. If the Y2 to Y5 figures are expressed as a percentage of the Y1 base year figures, how is this approach to analysis best described?**
 - A. Making use of trend statements
 - B. Making use of common size statements
 - C. Undertaking covariate analysis
 - D. Undertaking multivariate analysis

2. **A company has been carrying some accrued income for which the associated cash payment is now in doubt. How should this be dealt with in its accounts?**
 - A. By reclassifying it as deferred income
 - B. By adding it to trade receivables
 - C. By treating it as a bad debt
 - D. By offsetting it against a current liability

3. **A company with two million shares in issue has an equity value of £1.6m, an enterprise value of £2.2m, earnings per share (EPS) of 8.1p and a current market share price of 121.6p. What is its P/E ratio?**
 - A. 9.9x
 - B. 12.1x
 - C. 13.5x
 - D. 15.0x

4. **If a company's income statement indicates a residual loss to the company's shareholders during the relevant period, this is normally because the income shown:**
 - A. is lower than turnover
 - B. is exceeded by expenses
 - C. fell from the previous year
 - D. counterbalances marginal profit

5. **For which of the following purposes is it necessary to use the accounts of a parent company rather than group accounts?**
 - A. Valuing assets
 - B. Determining dividends
 - C. Performance measurement
 - D. Risk assessment

6. **Would dividend income from a UK company be classed as a permanent difference between accounting and taxable profits?**
- A. Yes, because there is no tax charge on dividends from other UK companies
 - B. Yes, because dividends from other UK companies are charged at a higher rate than other taxable income
 - C. No, dividend income represents a temporary difference
 - D. No, because dividend income is only tax free from overseas investments
7. **Measurement at amortised cost would normally be appropriate for:**
- A. bonds
 - B. commodities
 - C. equities
 - D. foreign exchange
8. **A company has bought a machine for £220,000 which it expects to last for five years, at the end of which it will have a residual value of £48,000. If its annual profits before tax are £120,000, the capital allowance in year one is £40,000, depreciation is calculated on a straight-line basis and a tax rate of 25% is used, how much corporation tax will be due in the first year?**
- A. £11,400
 - B. £28,600
 - C. £31,400
 - D. £48,600
9. **Assets are classified as held for sale in the statement of financial position if a sale is expected within a minimum period of:**
- A. 1 month of the date of classification
 - B. 3 months of the date of classification
 - C. 6 months of the date of classification
 - D. 12 months of the date of classification
10. **A company bought a building for £186,000 and realised a profit of £32,000 when it was sold. If its carrying amount on the date of sale was £62,000, what cash inflow should be entered in the company's cash flows from investing activities?**
- A. £32,000
 - B. £94,000
 - C. £124,000
 - D. £218,000

11. What is the least liquid type of current asset?
- A. Deposits
 - B. Inventories
 - C. Receivables
 - D. Overdrafts
12. Where a company includes an underlying earnings per share figure in its accounts:
- A. this must appear on the face of the company's income statement
 - B. this must appear on the face of the company's balance sheet
 - C. the company can choose its own method of calculation
 - D. the company does not need to present any other figures for EPS
13. Where a company incurs a significant cost in restructuring the business, this is likely to be disclosed in its financial statements as:
- A. a discontinued operation
 - B. an equalisation element
 - C. an exceptional item
 - D. a contingent liability
14. An accountant has explained to a company's board that, compared to basic earnings per share, a diluted earnings per share figure is based on a worst-case scenario. This scenario specifically takes into account what key factor?
- A. Level of interest rates
 - B. Volatility of the stock market
 - C. Exercise of conversion options
 - D. Likelihood of net losses
15. The following data was obtained from a company's accounts; Profit before tax (£1.4m), Profit after tax (£1.1m), Depreciation (£28,000), Amortisation (£13,600), decrease in inventories (£82,000), decrease in trade receivables ((£46,000) and decrease in trade payables (£62,000). Based solely on this data, what is its cash flow from operating activities using the indirect method?
- A. £1,207,600
 - B. £1,331,600
 - C. £1,507,600
 - D. £1,631,600

16. This table summarises information relating to a company that has 300,000 shares in issue which are currently trading at £1.50.

Revenue	250,000
Costs of goods sold	183,000
Operating expenses	24,000
Finance Costs	1,720
Tax	7,843

What is this company's earnings per share?

- A. 0.11
 - B. 0.14
 - C. 0.22
 - D. 0.83
17. What is the correct designation for an asset that is under the course of construction?
- A. Deferred tax asset
 - B. Property, plant and equipment
 - C. Intangible
 - D. Investment property
18. When preparing a company's financial statements, why is it important to know the expected settlement date of a liability?
- A. It dictates how initial cost will be measured
 - B. It dictates how ongoing cost will be measured
 - C. It determines the way it will be recorded in statement of financial position
 - D. It determines the way it will be recorded in the statement of cash flow
19. A company's cumulative profits to date are £1.8 million but the retained earnings figure shown on its statement of financial position is only £1.6m. Assuming no dividends have been paid, what is the £200,000 difference likely to reflect?
- A. Income received from external investments
 - B. Bond interest payment commitments
 - C. Capital reserves set aside after a building sale
 - D. Liabilities relating to preference shareholders

- 20. A depreciation charge is best described as:**
- A. a cash flow generated by a financing activity
 - B. a cash flow generated by an operating activity
 - C. an accounting measure to reflect the use of a non-current asset over time
 - D. an accounting measure to help fund the purchase of a future item of equipment
- 21. Where would a hedging reserve normally appear in a set of accounts?**
- A. Current liabilities
 - B. Non-current assets
 - C. Retained earnings
 - D. Shareholders' equity
- 22. A company intends to buy back a tranche of its own shares at a cost of £820,000. In accordance with accounting requirements, this payment:**
- A. will be treated as a financing activity for cash flow purposes
 - B. will be treated as an investing activity for cash flow purposes
 - C. must be made from a segregated shareholder's account
 - D. must be made from a segregated reserve account
- 23. Which of the following can be used to calculate the stage of completion for revenue recognition purposes?**
- A. Performance
 - B. Sales
 - C. Output
 - D. Reconciliation
- 24. A company has borrowings of £1.2m at the beginning of the year and £1.8m at the end of the year. How should this be reflected in its cash flow statement? As a cash:**
- A. inflow of £600,000 under financing activities
 - B. outflow of £600,000 under financing activities
 - C. inflow of £600,000 under investing activities
 - D. outflow of £600,000 under investing activities

25. How does free cash flow to the firm (FCFF) differ from the cash flow from operating activities (CFO) in the cash flow statement?
- A. FCFF also reflects investing and financing cash flows
 - B. FCFF also includes trade receivables that are expected within three months of the year end
 - C. FCFF also includes the cash impact of any capital expenditure
 - D. FCFF takes CFO and deducts the cost of servicing debt and any dividends paid
26. Which of the following events would automatically trigger an entry in the cash flow from investing activities section of a company's cash flow statement?
- A. Selling a forklift truck for £8,200
 - B. Paying out share dividends of £13,600
 - C. Improving its trade receivables by £6,100
 - D. Decreasing the value of its stock inventory by £11,100
27. When a subsidiary is acquired part way through the year, how will its retained earnings be dealt with in the group balance sheet?
- A. Only post-acquisition earnings will be included in the goodwill calculation
 - B. Only post-acquisition earnings will be included in the group retained earnings
 - C. Both pre- and post-acquisition earnings will be included in the goodwill calculation
 - D. Both pre- and post-acquisition earnings will be included in the group retained earnings
28. Company X and Company Y are both wholly owned subsidiaries of the same parent company. During the last accounting year Company X sold goods to Company Y for £120,000, making a profit on the transaction of £35,000. If all the goods remained in Company Y's inventory at the end of the year, then the consolidated gross profit figure must be:
- A. reduced by £35,000
 - B. reduced by £85,000
 - C. increased by £35,000
 - D. increased by 85,000
29. A parent company has just sold 30% of a wholly owned subsidiary to an investor. If there are 10,000 £1 ordinary shares in issue for the subsidiary and its retained earnings are £35,000, what is the value of the non-controlling interest?
- A. £10,500
 - B. £13,500
 - C. £25,500
 - D. £31,500

30. How is the revenue figure shown in a company's financial statements obtained?
- A. By subtracting costs from turnover
 - B. By subtracting distributions from turnover
 - C. By identifying income arising from its accounts payable
 - D. By identifying income arising from its ordinary activities
31. A corporate entity requires unanimous agreement from three separate companies in order to implement decisions relating to specific activities. In this scenario, the companies are best described as:
- A. having significant influence
 - B. holding joint control
 - C. having equity priority status
 - D. holding associate status

32. A company's annual figures include the following amounts:

Sales revenue	£42,000
Cost of sales	£21,000
Inventory	£4,600
Profit before tax	£11,500
Profit after tax	£9,200

What is its inventory turnover?

- A. 2.00x
 - B. 2.50x
 - C. 4.57x
 - D. 9.13x
33. A company has just bought all the shares in one of its suppliers. If the cost of the investment was £150,000, and the financial statements for the supplier show that it had ordinary share capital of £50,000, a share premium of £30,000 and retained earnings on acquisition of £25,000, what figure should be shown for goodwill arising from this acquisition in the company's consolidated balance sheet?
- A. £45,000
 - B. £70,000
 - C. £75,000
 - D. £100,000

34. A company's balance sheet shows the following items:

Current assets	£64,000
Current liabilities	£28,000
Shareholders' funds	£118,000
Non-current assets	£82,000

What is the company's current ratio?

- A. 1.84x
- B. 2.29x
- C. 2.93x
- D. 4.21x

35. What key factor dictates whether an asset should be placed in the current assets or non-current assets section of a company's statement of financial position?

- A. The way in which it is used
- B. Its value relative to other assets
- C. Its value relative to its overall liabilities
- D. The status of its property title

36. The following figures were extracted from a company's financial statements:

Profit from operations	£620,000
Interest receivable	£31,200
Shareholders' equity	£3,100,000
Non-current liabilities	£210,000
Borrowings in current liabilities	£84,000

Based on this information, what is the return on capital employed?

- A. 17.3%
- B. 18.3%
- C. 19.2%
- D. 20.5%

- 37. Where a parent company holds an investment in an associate company, and the investment is classified as 'held for sale', it should be accounted for under:**
- A. IFRS 5 (Non-current Assets Held for Sale and Discontinued Operations)
 - B. IFRS 9 (Financial Instruments)
 - C. IFRS 5 if less than 30% is held, otherwise under IAS 28 (Investments in Associates and Joint Ventures)
 - D. IFRS 9 if less than 30% is held, otherwise under IAS 28
- 38. The sources of information that are useful for assessing a company's future performance can typically be divided into what two categories?**
- A. Internal and external data
 - B. Horizontal and vertical details
 - C. Employee and employer-sponsored data
 - D. Statutory and non-statutory details
- 39. A company recently received two invoices. The first was for servicing the office air conditioning and the second was for carpet cleaning. Which one of the following statements is true?**
- A. Only one of these invoices will be shown as a carrying amount
 - B. Both invoices can be offset against depreciation charges
 - C. Only one of these invoices can be treated as revenue expenditure
 - D. Neither of these invoices can be treated as capital expenditure
- 40. A company's gearing ratio has steadily increased over recent years, while its share capital has remained constant. What will this typically indicate?**
- A. The company's borrowing has increased
 - B. Loans made by the company have increased
 - C. Dividend distributions have been persistently high
 - D. Sales revenue has been persistently high

Answers to Multiple Choice Questions

1. A Chapter 5, Section 2.2.1

Trend statements are more commonly prepared for income statement information, by choosing one year as the base year and expressing similar items of other years as a percentage of that base year.

2. C Chapter 1, Section 2.4

To show accrued income, the company must be confident that the cash will actually be received; if this subsequently is in doubt, then a bad debt must be reflected, giving an expense in the income statement and removing the receivable in the statement of financial position.

3. D Chapter 5, Section 1.6.2

$$\text{Price/Earnings} = \frac{\text{Current market price per share}}{\text{Earnings per share}}$$

In this case the price/earnings ratio = 121.6p / 8.1 = 15.0x

4. B Chapter 1, Section 1.1

The income statement includes all of the income that the company has earned during the period, and deducts the expenses it has incurred. The remaining profit (if income exceeds expenses) or loss (if expenses exceed income) belongs to the company's owners or shareholders.

5. B Chapter 4, Section 1.1

The parent company's accounts are relevant mainly for determining the maximum amount of dividend that the company can legally distribute (its distributable profits). The group accounts are used by investors and lenders for valuation, performance measurement and assessing risk.

6. A Chapter 1, Section 4.2.1

Permanent differences include income which is never subject to corporation tax, eg, dividends from UK companies. As a result, a company may have reported income but no tax charge.

7. A Chapter 2, Section 3.3.1

The subsequent treatment of bonds in the statement of financial position is measurement at amortised cost.

8. B Chapter 1, Section 4.3

Depreciation (calculated on a straight-line basis) = $(£220,000 - £48,000) / 5 = £34,400$ Profit chargeable to tax = Profit before tax + depreciation – capital allowances = $£120,000 + £34,400 - £40,000 = £114,400$ Corporation tax payable = $£114,400 \times 25\% = £28,600$.

9. D Chapter 1, Section 4.3

A sale is expected within the next 12 months from the date of classification.

10. B Chapter 3, Section 2.4

The sales proceeds to be reported in cash flows from investing activities = carrying amount + profit = $£62,000 + £32,000 = £94,000$.

11. B Chapter 2, Section 2.2

Inventories are usually the least liquid and most difficult current asset to turn into cash. Trade receivables and cash and cash equivalents are both more liquid. Overdrafts are current liabilities.

12. C Chapter 1, Section 6.1

IAS 33, the accounting standard on EPS, recognises that companies may want to disclose additional measures of EPS and allows them to do so providing that these are:

- presented in the notes to the accounts, not on the face of the income statement, and
- reconciled to the basic and diluted figures per IAS 33.

This leaves preparers with scope to come up with different (and often higher) EPS measures, frequently described as 'underlying EPS' or something similar.

13. C Chapter 1, Section 5.3

Items that are material to users of the financial statements should be shown separately, either on the face of the income statement, or in the notes that follow. These are often referred to as exceptional items, and include costs of business restructurings.

14. C Chapter 1, Section 6.2

Diluted EPS presents a worst-case scenario of how far basic EPS could fall if all instruments that could be converted into ordinary shares that were outstanding at the reporting date had done so.

15. C Chapter 3, Section 2.3

To obtain cash flow from operating activities using the indirect method, profit before tax is taken as the starting point. Depreciation and amortisation are added back, decreases in inventories and trade receivables since the previous year are added, and decreases in trade payables are deducted.

In this case cash flow from operating activities = $£1.4m + £28,000 + £13,600 + £82,000 + £46,000 - £62,000 = £1,507,600$.

16. A Chapter 1, Section 6.3

Gross profit = Revenue – Cost of goods sold

$$250,000 - 183,000 = 67,000$$

Operating profit = gross profit – operating expenses

$$67,000 - 24,000 = 43,000$$

Net profit = operating profit – (finance costs + tax charge)

$$43,000 - (1,720 + 7,843) = 33,437$$

$$\text{EPS} = \frac{\text{Net profit attributable to ordinary shareholders}}{\text{Weighted average number of ordinary shares}}$$

$$33,437 / 300,000 = 0.11$$

17. B Chapter 2, Section 2.3.1

PPE includes categories such as property (land and buildings), plant and equipment, and assets under the course of construction.

18. C Chapter 2, Section 3.1

Liabilities are classified as either current or non-current. A current liability is expected to be settled within 12 months of the reporting date. A non-current liability is expected to be settled more than 12 months after the reporting period.

19. C Chapter 2, Section 4

Retained earnings are the cumulative profits or losses that a company has generated since its incorporation. Retained earnings can be used to pay dividends to shareholders or to fund expansion and growth in the business. Capital reserves are a reserve where profits and losses from selling non-current assets can be set aside.

20. C Chapter 3, Section 2.1

Not all income statement items result in an immediate cash flow or even any cash flow at all.

For example:

Depreciation – the cash flow arises when a non-current asset is purchased; the income statement depreciation charge is an accounting measure to reflect the use of the non-current asset over time and is not a cash flow.

21. D Chapter 2, Section 4

Shareholders' equity consists of all balances that are owned by equity shareholders in the company. This includes:

- ordinary share capital
- share premium (the excess of issue price over the nominal value of the share)
- retained earnings (accumulated profits/losses since incorporation)
- revaluation reserve (if non-current assets are revalued), and
- other reserves (if the company wishes or is required to keep some retained earnings separate, such as a hedging reserve).

22. A Chapter 3, Section 2.2

Financing activities represent cash flows with providers of finance to the business. They include cash proceeds from issuing shares, payment to buy back a company's own shares, cash proceeds from taking out borrowings, cash repayments of amounts borrowed, and cash payments on a lease.

23. C Chapter 1, Section 2.2

If the control of goods or services is transferred to the customer over time, eg, advertising services or construction of a golf course, revenue is recognised based on the stage of completion. The stage of completion can be based on:

- output methods (the value to the customer of the goods or services transferred to date relative to the remaining goods or services promised in the contract), or
- input methods (the entity's efforts or inputs to the satisfaction of the performance obligation to date, eg, costs incurred to date relative to total costs).

24. A Chapter 3, Section 2.4

Borrowings have increased from £1.2 million to £1.8 million, representing a cash inflow of £600,000 (£1.8 million less £1.2 million).

25. C Chapter 3, Section 3.1

FCFF measures how efficient a firm is in generating cash. Investors can use it to determine how much excess cash is available to return to finance providers or for growth. Growing FCFF can be an indicator of higher future profits. Free cash flow to the firm (FCFF) is typically calculated as operating cash flows from the cash flow statement minus net capital expenditure on non-current assets. FCFF is the cash that is available to return to finance providers or fund other long-term investment for growth in the business.

26. A Chapter 3, Section 2.4

Investing activities include a range of items such as payments to acquire PPE or sales proceeds when PPE is sold.

27. B Chapter 4, Section 1.7

Acquisitions of a subsidiary part way through the year are straightforward for the group balance sheet because the subsidiary's pre-acquisition retained earnings are dealt with in the goodwill calculation and group retained earnings must include only the subsidiary's post-acquisition retained earnings.

28. A Chapter 4, Section 1.8.1

Any unrealised profits on intra-group trading should be excluded from the figure for group profits. This will occur whenever goods sold at a profit within the group remain in the inventory of the purchasing company at the year end.

The way to deal with this is to calculate the unrealised profit on unsold inventories at the year end and reduce consolidated gross profit by this amount.

29. B Chapter 4, Section 1.4.1

The value of the NCI is the NCI share of the subsidiary's share capital plus the NCI share of the subsidiary's retained earnings.

In this case the value of the NCI = $30\% \times 10,000 + 30\% \times £35,000 = £3,000 + £10,500 = £13,500$.

30. D Chapter 1, Section 2.5

Revenue is income arising in the course of an entity's ordinary activities. In other words, the entity's core business operations.

31. B Chapter 4, Section 2.1

Joint control – Contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

32. C Chapter 5, Section 1.4.1

$$\text{Inventory turnover} = \frac{\text{Cost of sales}}{\text{Inventory}}$$

In this case inventory turnover = $£21,000 / £4,600 = 4.57x$

33. A Chapter 4, Section 1.5.2

Goodwill = Cost of investment less share of net assets acquired (represented by ordinary share capital, share premium and retained earnings on acquisition).

In this case goodwill = $£150,000 - £50,000 - £30,000 - £25,000 = £45,000$.

34. B Chapter 5, Section 1.3.1

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

In this case current ratio = £64,000 / £28,000 = 2.29x

35. A Chapter 2, Section 2.1

Assets are classified as either current or non-current. Items that are continuously circulating in the operating cycle of a business, such as inventories and receivables, are typically current assets.

Non-current assets include property, plant and machinery that are utilised over a number of years in the company's operations.

36. C Chapter 5, Section 1.2.1

$$\text{ROCE} = \frac{\text{Profits from operations} + \text{Interest receivable}}{\text{Capital employed}} \times 100\%$$

Capital employed can be calculated from the financing side as: Capital employed = Shareholders' funds / equity + Non-current liabilities + Borrowings in current liabilities.

In this case return on capital employed = (£620,000 + £31,200) / (£3,100,000 + £210,000 + £84,000) x 100 = 19.2%.

37. A Chapter 4, Section 2.2

IAS 28 (Investments in Associates and Joint Ventures) requires all investments in associates to be accounted for in the consolidated accounts using the equity method, unless the investment is classified as 'held for sale' in accordance with IFRS 5 (Non-Current Assets Held for Sale and Discontinued Operations) in which case it should be accounted for under IFRS 5.

38. A Chapter 5, Section 2.1

The financial statements are one source of information for financial analysis and trends.

Other sources of information that may be relevant in assessing a business's prospects include publicly available information and internal information, if the analyst is allowed access to that information. Internal information includes management and cash forecasts, sales budgets and strategy. External, publicly available, information includes industry information, macro-economic trends, disclosures required by regulatory authorities and the directors' report and management commentary in the annual report.

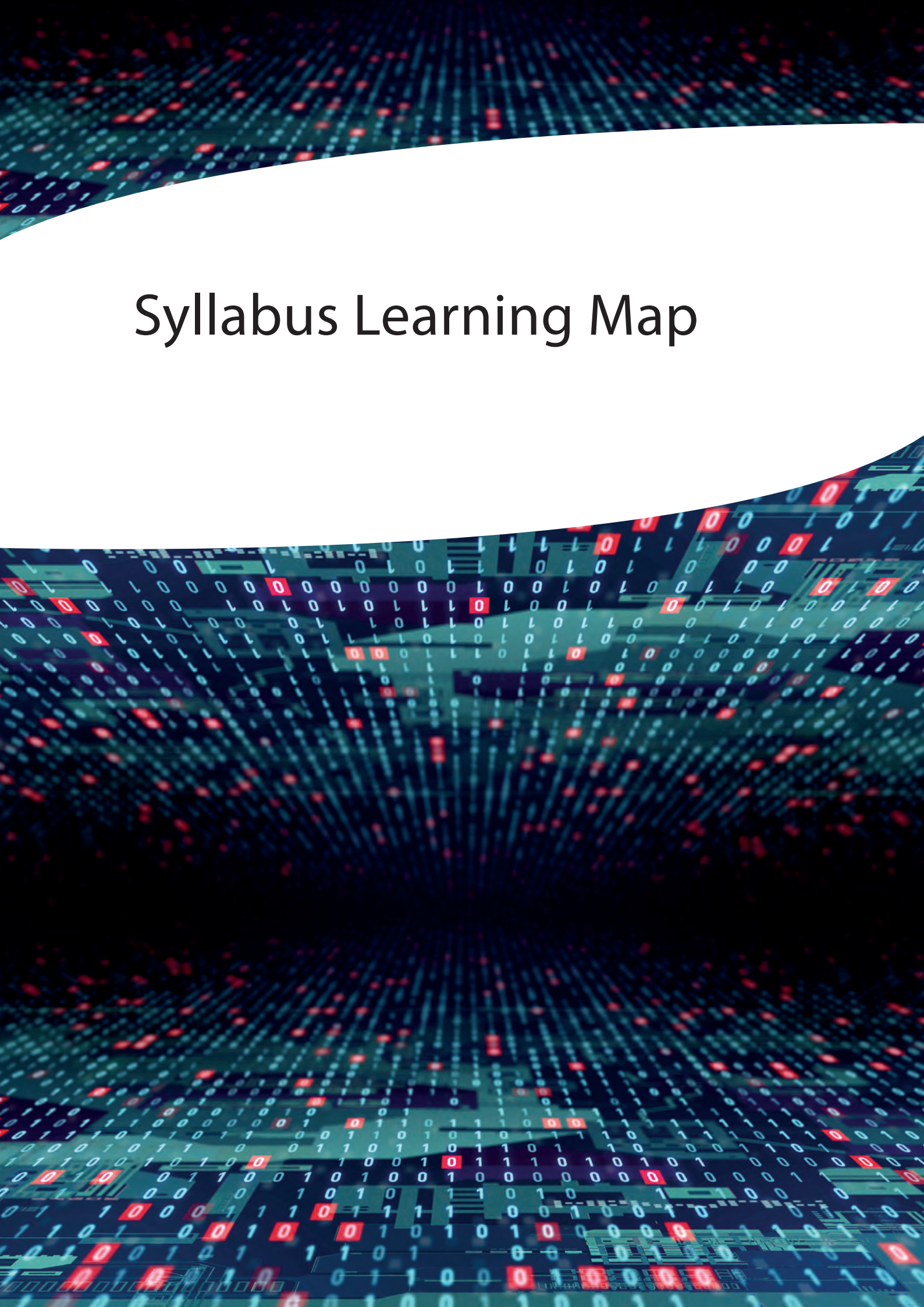
39. D Chapter 1, Section 3.2

Repairs and maintenance costs should be shown in the income statement and are day-to-day servicing costs rather than capital expenditure.

40. A Chapter 5, Section 1.5.2

The gearing ratio examines the proportion of borrowings (debt) in the company's capital structure versus equity shareholders' funds.

$$\text{Debt to equity} = \frac{\text{Interest-bearing loans} + \text{Preference share capital}}{\text{Equity shareholders' funds}} \times 100\%$$

The background of the page is a complex, abstract digital pattern. It features a dense field of binary digits (0s and 1s) in white and red, set against a dark blue and black background. The digits are arranged in a way that creates a sense of depth and perspective, with some appearing to recede into the distance. Overlaid on this are numerous thin, glowing lines in shades of blue and green, which intersect and crisscross the binary code, giving the impression of a data network or a complex algorithm. The overall effect is a high-tech, futuristic aesthetic.

Syllabus Learning Map

Syllabus Unit/ Element		Chapter/ Section
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Element 1	The Income Statement	Chapter 1
1.1	Overview On completion, the candidate should:	
1.1.1	Understand the purpose, format and main contents of the Income Statement	1
1.2	Accounting for Revenue On completion, the candidate should:	
1.2.1	Understand the principles of revenue recognition (IFRS15): • Identification of contracts • Identification of performance obligations • Determination of transaction price • Allocation of the price to performance obligations • Recognition of revenue when/as performance obligations are satisfied • The impact of revenue recognition policies on benchmarking	2
1.2.2	Know the criteria for recognising revenue where performance obligations are met over a period of time	2.2
1.2.3	Know the characteristics of the following types of transaction: • Principal versus agent • Repurchase agreements • Bill and hold arrangements • Consignment arrangements	2.3
1.2.4	Understand the nature of reporting deferred and accrued income and the differences between the two	2.4
1.2.5	Understand the differences between income from ordinary activities and other items included in the income statement	2.5
1.3	Accounting for Expenses On completion, the candidate should:	
1.3.1	Understand the matching concept	3.1
1.3.2	Understand the general principles for recognising expenses and the distinction between capital and revenue expenditure	3.2
1.3.3	Understand the nature of non-cash expenses such as depreciation and amortisation	3.3
1.3.4	Be able to calculate straight-line depreciation	3.3

Syllabus Unit/ Element		Chapter/ Section
1.4	Accounting for Taxation On completion, the candidate should:	
1.4.1	Understand the difference between accounting profits and taxable profits and the meaning of tax-deductible expenses	4.1
1.4.2	Understand the meaning of temporary and permanent differences between accounting profits and taxable profits	4.2
1.4.3	Be able to calculate and account for current and deferred tax amounts	4.3
1.5	Non-Recurring Items On completion, the candidate should:	
1.5.1	Know the criteria for a disposal to be classified as discontinued operations	5.1
1.5.2	Understand the accounting treatment and presentation of discontinued operations	5.2
1.5.3	Know the accounting treatment and presentation of unusual or infrequent items	5.3
1.6	Earnings Per Share (EPS) On completion, the candidate should:	
1.6.1	Know the requirements for presenting EPS as per IAS 33 and the importance of EPS to investors	6.1
1.6.2	Understand the difference between basic and diluted EPS	6.2
1.6.3	Be able to calculate basic EPS including cases in which the company: • Repurchases shares • Issues additional shares • Make a bonus issue • Engages in a stock split (or consolidation)	6.3
1.6.4	Be able to calculate diluted EPS if a company has any of the following: • Convertible preference shares • Convertible bonds • Outstanding options or warrants	6.4

Syllabus Unit/ Element		Chapter/ Section
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Element 2	The Statement of Financial Position	Chapter 2
2.1	Overview On completion, the candidate should:	
2.1.1	Understand the purpose, format and main contents of the Statement of Financial Position	1
2.2	Assets On completion, the candidate should:	
2.2.1	Understand the distinction between current and non-current assets	2.1
2.2.2	Know the different types of current assets and how they rank in terms of liquidity of asset type	2.2
2.2.3	Know the different types of non-current assets and the measurement bases for initial recognition and subsequent valuation of the following non-current assets: • Property, plant and equipment (PP&E) • Investment property • Financial assets • Intangible assets • Deferred tax assets	2.3
2.2.4	Know the impact of stranded assets on the statement of financial position and income statement	2.4
2.3	Liabilities On completion, the candidate should:	
2.3.1	Understand the difference between current and non-current liabilities	3.1
2.3.2	Know the different types of current liabilities	3.2
2.3.3	Know the different types of non-current liabilities and the measurement bases for initial recognition and subsequent valuation of the following non-current liabilities: • Bonds • Leases • Deferred tax liabilities	3.3
2.4	Equity On completion, the candidate should:	
2.4.1	Know the components of shareholders' equity	4
2.4.2	Understand the differences between issued share capital, capital reserves and retained earnings	4

Syllabus Unit/ Element		Chapter/ Section
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Element 3	The Cash Flow Statement and Free Cash Flows	Chapter 3
3.1	Overview On completion, the candidate should:	
3.1.1	Understand the purpose, format and main contents of the Statement of Cash flows	1
3.2	Classification of Cash Flows On completion, the candidate should:	
3.2.1	Know the difference between cash transactions from non-cash transactions	2.1
3.2.2	Be able to apply the following cash flow classifications: • Cash flow from operating activities (CFO) • Cash flow from investing activities (CFI) • Cash flow from financing activities (CFF)	2.2
3.2.3	Understand the significance of cash flow from operating activities (CFO) using the indirect method	2.3
3.2.4	Be able to calculate cash flow from operating activities (CFO) using the indirect method	2.3
3.2.5	Understand the significance of cash flow from investing activities (CFI) including the acquisition or sale of property, plant and equipment (PP&E) and long-term investments	2.4
3.2.6	Be able to calculate cash flow from investing activities (CFI) including the acquisition or sale of property, plant and equipment (PP&E) and long-term investments	2.4
3.2.7	Understand the significance of cash flow from financing activities (CFF) including the issuance or repurchase of ordinary shares, preference shares, debt and the payment of dividends	2.4
3.2.8	Be able to calculate cash flow from financing activities (CFF) including the issuance or repurchase of ordinary shares, preference shares, debt and the payment of dividends	2.4
3.3	Free Cash Flows On completion, the candidate should:	
3.3.1	Know the difference between cash flow from operating activities (CFO) (as seen in the cash flow statement) and free cash flow to the firm (FCFF) and free cash flow to equity (FCFE) that are computed outside of the cash flow statement	3.1
3.3.2	Be able to calculate free cash flow to the firm (FCFF) and free cash flow to equity (FCFE) and reconcile the difference between the two	3.2

Syllabus Unit/ Element		Chapter/ Section
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Element 4	Group Accounting	Chapter 4
4.1	Subsidiaries On completion, the candidate should:	
4.1.1	Know the difference between group accounts and company accounts	1.1
4.1.2	Understand the meaning of the following in the context of a company group structure: • Parent • Subsidiary • Control • Consolidated accounts • Non-controlling interest (NCI)	1.2
4.1.3	Understand the treatment of the following in the preparation of a consolidated statement of financial position at acquisition: • Fair value adjustments for property, plant and equipment (PP&E) • Fair value of cash and shares used as consideration for the acquisition • Intra-group trading balances and unrealised profit from intra-group trading • Acquisition of subsidiaries part way through the year	1.3 & 1.7
4.1.4	Be able to calculate the value of non-controlling interest (NCI)	1.4
4.1.5	Be able to calculate goodwill arising on consolidation	1.5
4.1.6	Know the requirements for reviewing goodwill under IFRS 3	1.6
4.1.7	Understand the treatment of the following in the preparation of a consolidated income statement at acquisition: • Intra-group trading balances and unrealised profit from intra-group trading • Acquisition of subsidiaries part way through the year	1.8
4.2	Associates On completion, the candidate should:	
4.2.1	Understand the meaning of significant influence and joint control	2.1
4.2.2	Know the characteristics of a parent-associate relationship	2.2
4.2.3	Understand the equity method of accounting for associates	2.3

Syllabus Unit/ Element		Chapter/ Section
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Element 5	Financial Analysis	Chapter 5
5.1	Ratios On completion, the candidate should:	
5.1.1	Be able to calculate activity ratios	1.4
5.1.2	Be able to calculate liquidity ratios	1.3
5.1.3	Be able to calculate solvency ratios	1.5
5.1.4	Be able to calculate profitability ratios	1.2
5.1.5	Be able to calculate valuation ratios	1.6
5.1.6	Understand the limitations of ratios and reliance on historical data for financial analysis	1.7
5.2	Analysis Considerations On completion, the candidate should:	
5.2.1	Know other sources of information that may be relevant in assessing an entity's performance and financial position	2.1
5.2.2	Understand other tools for analysis including: • Trend statements • Common size statements • Multivariate analysis	2.2
5.2.3	Understand the use of prior year financial statements, forecasts, accounting policies, financial statements of competitors and industry averages in assessing an entity's performance and financial position	2.3

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	The Income Statement	12
2	The Statement of Financial Position	7
3	The Cash Flow Statement and Free Cash Flows	7
4	Group Accounting	7
5	Financial Analysis	7
Total		40



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