

CIMA

Subject F3

Financial Strategy

Study Text



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Introduction

How to use the Materials

These official CIMA learning materials have been carefully designed to make your learning experience as easy as possible and to give you the best chances of success in your objective tests.

The product range contains a number of features to help you in the study process. They include:

- a detailed explanation of all syllabus areas
- extensive 'practical' materials
- generous question practice, together with full solutions.

This Study Text has been designed with the needs of home study and distance learning candidates in mind. Such students require very full coverage of the syllabus topics, and also the facility to undertake extensive question practice. However, the Study Text is also ideal for fully taught courses.

The main body of the text is divided into a number of chapters, each of which is organised on the following pattern:

- **Detailed learning outcomes.** These describe the knowledge expected after your studies of the chapter are complete. You should assimilate these before beginning detailed work on the chapter, so that you can appreciate where your studies are leading.
- **Step-by-step topic coverage.** This is the heart of each chapter, containing detailed explanatory text supported where appropriate by worked examples and exercises. You should work carefully through this section, ensuring that you understand the material being explained and can tackle the examples and exercises successfully. Remember that in many cases knowledge is cumulative: if you fail to digest earlier material thoroughly, you may struggle to understand later chapters.
- **Activities.** Some chapters are illustrated by more practical elements, such as comments and questions designed to stimulate discussion.
- **Question practice.** The text contains three styles of question:
 - Exam-style objective test questions (OTQs).
 - 'Integration' questions – these test your ability to understand topics within a wider context. This is particularly important with calculations where OTQs may focus on just one element but an integration question tackles the full calculation, just as you would be expected to do in the workplace.

- ‘Case’ style questions – these test your ability to analyse and discuss issues in greater depth, particularly focusing on scenarios that are less clear cut than in the objective tests, and thus provide excellent practice for developing the skills needed for success in the Management Level Case Study Examination.
- **Solutions.** Avoid the temptation merely to ‘audit’ the solutions provided. It is an illusion to think that this provides the same benefits as you would gain from a serious attempt of your own. However, if you are struggling to get started on a question you should read the introductory guidance provided at the beginning of the solution, where provided, and then make your own attempt before referring back to the full solution.

If you work conscientiously through this Official CIMA Study Text according to the guidelines above you will be giving yourself an excellent chance of success in your objective tests. Good luck with your studies!

Quality and accuracy are of the utmost importance to us so if you spot an error in any of our products, please send an email to mykaplanreporting@kaplan.com with full details, or follow the link to the feedback form in MyKaplan.

Our Quality Co-ordinator will work with our technical team to verify the error and take action to ensure it is corrected in future editions.

Icon explanations



Definition – These sections explain important areas of knowledge which must be understood and reproduced in an assessment environment.



Key point – Identifies topics which are key to success and are often examined.



Supplementary reading – These sections will help to provide a deeper understanding of core areas. The supplementary reading is **NOT** optional reading. It is vital to provide you with the breadth of knowledge you will need to address the wide range of topics within your syllabus that could feature in an assessment question. **Reference to this text is vital when self-studying.**



Test your understanding – Following key points and definitions are exercises which give the opportunity to assess the understanding of these core areas.



Illustration – To help develop an understanding of particular topics. The illustrative examples are useful in preparing for the Test your understanding exercises.



Exclamation mark – This symbol signifies a topic which can be more difficult to understand. When reviewing these areas, care should be taken.



New – Identifies topics that are brand new in subjects that build on, and therefore also contain, learning covered in earlier subjects.



Tutorial note – Included to explain some of the technical points in more detail.

Study technique

Passing exams is partly a matter of intellectual ability, but however accomplished you are in that respect you can improve your chances significantly by the use of appropriate study and revision techniques. In this section we briefly outline some tips for effective study during the earlier stages of your approach to the objective tests. We also mention some techniques that you will find useful at the revision stage.

Planning

To begin with, formal planning is essential to get the best return from the time you spend studying. Estimate how much time in total you are going to need for each subject you are studying. Remember that you need to allow time for revision as well as for initial study of the material.

With your study material before you, decide which chapters you are going to study in each week, and which weeks you will devote to revision and final question practice.

Prepare a written schedule summarising the above and stick to it!

It is essential to know your syllabus. As your studies progress you will become more familiar with how long it takes to cover topics in sufficient depth. Your timetable may need to be adapted to allocate enough time for the whole syllabus.

Students are advised to refer to the examination blueprints (see page P.13 for further information) and the CIMA website, www.cimaglobal.com, to ensure they are up-to-date.

The amount of space allocated to a topic in the Study Text is not a very good guide as to how long it will take you. The syllabus weighting is the better guide as to how long you should spend on a syllabus topic.

Tips for effective studying

- (1) Aim to find a quiet and undisturbed location for your study, and plan as far as possible to use the same period of time each day. Getting into a routine helps to avoid wasting time. Make sure that you have all the materials you need before you begin so as to minimise interruptions.
- (2) Store all your materials in one place, so that you do not waste time searching for items every time you want to begin studying. If you have to pack everything away after each study period, keep your study materials in a box, or even a suitcase, which will not be disturbed until the next time.
- (3) Limit distractions. To make the most effective use of your study periods you should be able to apply total concentration, so turn off all entertainment equipment, set your phones to message mode, and put up your 'do not disturb' sign.
- (4) Your timetable will tell you which topic to study. However, before diving in and becoming engrossed in the finer points, make sure you have an overall picture of all the areas that need to be covered by the end of that session. After an hour, allow yourself a short break and move away from your Study Text. With experience, you will learn to assess the pace you need to work at. Each study session should focus on component learning outcomes – the basis for all questions.
- (5) Work carefully through a chapter, making notes as you go. When you have covered a suitable amount of material, vary the pattern by attempting a practice question. When you have finished your attempt, make notes of any mistakes you made, or any areas that you failed to cover or covered more briefly. Be aware that all component learning outcomes will be tested in each examination.
- (6) Make notes as you study, and discover the techniques that work best for you. Your notes may be in the form of lists, bullet points, diagrams, summaries, 'mind maps', or the written word, but remember that you will need to refer back to them at a later date, so they must be intelligible. If you are on a taught course, make sure you highlight any issues you would like to follow up with your lecturer.
- (7) Organise your notes. Make sure that all your notes, calculations etc. can be effectively filed and easily retrieved later.

Progression

There are two elements of progression that we can measure: how quickly students move through individual topics within a subject; and how quickly they move from one course to the next. We know that there is an optimum for both, but it can vary from subject to subject and from student to student. However, using data and our experience of student performance over many years, we can make some generalisations.

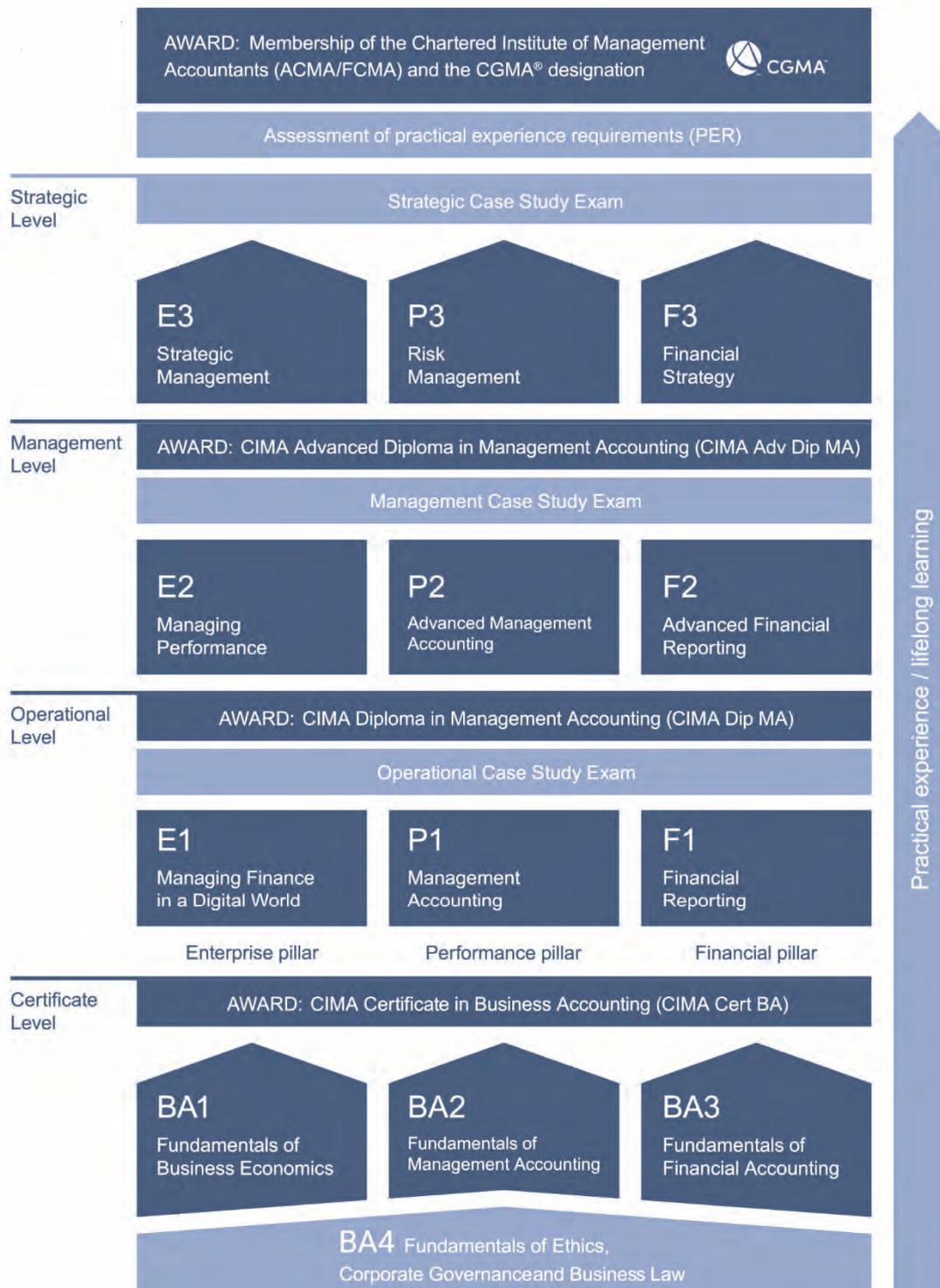
A fixed period of study set out at the start of a course with key milestones is important. This can be within a subject, for example 'I will finish this topic by 30 June', or for overall achievement, such as 'I want to be qualified by the end of next year'.

Your qualification is cumulative, as earlier papers provide a foundation for your subsequent studies, so do not allow there to be too big a gap between one subject and another. For example, F3 *Financial strategy* builds on your knowledge of long-term sources of finance from F2 *Advanced financial reporting* as well as risks and control and capital investment decision making from P2 *Advanced management accounting*.

We know that exams encourage techniques that lead to some degree of short term retention, the result being that you will simply forget much of what you have already learned unless it is refreshed (look up Ebbinghaus Forgetting Curve for more details on this). This makes it more difficult as you move from one subject to another: not only will you have to learn the new subject, you will also have to relearn all the underpinning knowledge as well. This is very inefficient and slows down your overall progression which makes it more likely you may not succeed at all.

In addition, delaying your studies slows your path to qualification which can have negative impacts on your career, postponing the opportunity to apply for higher level positions and therefore higher pay.

You can use the following diagram showing the whole structure of your qualification to help you keep track of your progress. Make sure you carefully review the 2019 CIMA syllabus transition rules and seek appropriate advice if you are unsure about your progression through the qualification.



Reproduced with permission from CIMA

Objective test

Objective test questions require you to choose or provide a response to a question whose correct answer is predetermined.

The most common types of objective test question you will see are:

- Multiple choice, where you have to choose the correct answer(s) from a list of possible answers. This could either be numbers or text.
- Multiple choice with more choices and answers, for example, choosing two correct answers from a list of eight possible answers. This could either be numbers or text.
- Single numeric entry, where you give your numeric answer, for example, profit is \$10,000.
- Multiple entry, where you give several numeric answers.
- True/false questions, where you state whether a statement is true or false.
- Matching pairs of text, for example, matching a technical term with the correct definition.
- Other types could be matching text with graphs and labelling graphs/diagrams.

In every chapter of this Study Text we have introduced these types of questions, but obviously we have had to label answers A, B, C etc. rather than using click boxes. For convenience, we have retained quite a few questions where an initial scenario leads to a number of sub-questions. There will be no questions of this type in the objective tests.

Guidance re CIMA on-screen calculator

As part of the CIMA objective test software, candidates are now provided with a calculator. This calculator is on-screen and is available for the duration of the assessment. The calculator is available in each of the objective tests and is accessed by clicking the calculator button in the top left hand corner of the screen at any time during the assessment. Candidates are permitted to utilise personal calculators as long as they are an approved CIMA model. Authorised CIMA models are listed here: <https://www.cimaglobal.com/Studying/study-and-resources/>.

All candidates must complete a 15-minute exam tutorial before the assessment begins and will have the opportunity to familiarise themselves with the calculator and practise using it. The exam tutorial is also available online via the CIMA website.

Candidates may practise using the calculator by accessing the online exam tutorial.

Fundamentals of objective tests

The objective tests are 90-minute assessments comprising 60 compulsory questions, with one or more parts. There will be no choice and all questions should be attempted. All elements of a question must be answered correctly for the question to be marked correctly. All questions are equally weighted.

CIMA syllabus 2019 – Structure of subjects and learning outcomes

Details regarding the content of the new CIMA syllabus can be located within the CIMA 2019 professional syllabus document.

Each subject within the syllabus is divided into a number of broad syllabus topics. The topics contain one or more lead learning outcomes, related component learning outcomes and indicative knowledge content.

A learning outcome has two main purposes:

- (a) To define the skill or ability that a well prepared candidate should be able to exhibit in the examination.
- (b) To demonstrate the approach likely to be taken in examination questions.

The learning outcomes are part of a hierarchy of learning objectives. The verbs used at the beginning of each learning outcome relate to a specific learning objective, e.g.

Calculate the break-even point, profit target, margin of safety and profit/volume ratio for a single product or service.

The verb '**calculate**' indicates a level three learning objective. The following tables list the verbs that appear in the syllabus learning outcomes and examination questions.

The examination blueprints and representative task statements

CIMA have also published examination blueprints giving learners clear expectations regarding what is expected of them.

The blueprint is structured as follows:

- Exam content sections (reflecting the syllabus document)
- Lead and component outcomes (reflecting the syllabus document)
- Representative task statements.

A representative task statement is a plain English description of what a CIMA finance professional should know and be able to do.

The content and skill level determine the language and verbs used in the representative task.

CIMA will test up to the level of the task statement in the objective tests (an objective test question on a particular topic could be set at a lower level than the task statement in the blueprint).

The format of the objective test blueprints follows that of the published syllabus for the 2019 CIMA Professional Qualification.

Weightings for content sections are also included in the individual subject blueprints.

CIMA VERB HIERARCHY

CIMA place great importance on the definition of verbs in structuring objective tests. It is therefore crucial that you understand the verbs in order to appreciate the depth and breadth of a topic and the level of skill required. The objective tests will focus on levels one, two and three of the CIMA hierarchy of verbs. However, they will also test levels four and five, especially at the management and strategic levels.

Skill level	Verbs used	Definition
Level 5 Evaluation How you are expected to use your learning to evaluate, make decisions or recommendations	Advise Assess Evaluate Recommend Review	Counsel, inform or notify Evaluate or estimate the nature, ability or quality of Appraise or assess the value of Propose a course of action Assess and evaluate in order, to change if necessary
Level 4 Analysis How you are expected to analyse the detail of what you have learned	Align Analyse Communicate Compare and contrast Develop Discuss Examine Interpret Monitor Prioritise Produce	Arrange in an orderly way Examine in detail the structure of Share or exchange information Show the similarities and/or differences between Grow and expand a concept Examine in detail by argument Inspect thoroughly Translate into intelligible or familiar terms Observe and check the progress of Place in order of priority or sequence for action Create or bring into existence
Level 3 Application How you are expected to apply your knowledge	Apply Calculate Conduct Demonstrate Prepare Reconcile	Put to practical use Ascertain or reckon mathematically Organise and carry out Prove with certainty or exhibit by practical means Make or get ready for use Make or prove consistent/compatible

Skill level	Verbs used	Definition
Level 2 Comprehension What you are expected to understand	Describe Distinguish Explain Identify Illustrate	Communicate the key features of Highlight the differences between Make clear or intelligible/state the meaning or purpose of Recognise, establish or select after consideration Use an example to describe or explain something
Level 1 Knowledge What you are expected to know	List State Define Outline	Make a list of Express, fully or clearly, the details/facts of Give the exact meaning of Give a summary of

Information concerning formulae and tables will be provided via the CIMA website, www.cimaglobal.com.

SYLLABUS GRIDS

F3: Financial Strategy

Create financial strategy, evaluate and manage financial risk and assess organisational value

Content weighting

Content area		Weighting
A	Financial policy decisions	15%
B	Sources of long-term funds	25%
C	Financial risks	20%
D	Business valuation	40%
		100%

F3A: Financial policy decisions

The overall strategy of the organisation must be supported by how its finances are organised. This requires an understanding of the different strategic financial objectives and policy options that are open to organisations. The choice of these objectives and policy options will be heavily influenced by the financial market requirements and the regulatory environment in which the organisation operates. This section examines these issues.

Lead outcome	Component outcome	Topics to be covered	Explanatory notes
1. Advise on strategic financial objectives.	a. Analyse different types of organisations and their objectives. b. Advise on financial objectives. c. Advise on non-financial objectives.	<ul style="list-style-type: none"> Profit and not-for-profit organisations Quoted and unquoted companies Private and public sector organisations Value for money, maximising shareholder wealth Earnings growth, dividend growth Impact of underlying economic conditions and business variables on financial objectives Enhancing the value of other non-financial capitals (human capital, intellectual capital and social and relationship capital) United Nations Sustainability Development Goals 	This section is about aligning financial objectives and policies to the strategies of the organisation. The key aim is to make sure that the organisation has a proper basis to determine what types of funds to access and how to use those funds. To do this effectively finance professionals must be able to evaluate the opportunities and constraints placed on them in the operating environment – particularly financial market requirements, the impact of taxation and the requirements of industry and financial market regulators.
2. Analyse strategic financial policy decisions.	Analyse the following policy decision areas: a. Investment b. Financing c. Dividends d. Interrelationships between policy decision areas	<ul style="list-style-type: none"> Use of policy decisions to meet cash needs of entity Sensitivity of forecast financial statements and future cash position to these policy decisions Consideration of the interests of stakeholders 	
3. Discuss the external influences on financial strategic decisions.	Discuss the influence of the following on financial strategic decisions a. Market requirements b. Taxation c. Regulatory requirements	<ul style="list-style-type: none"> Lenders' assessment of creditworthiness Consideration of domestic and international tax regulations Consideration of industry regulations such as price and service controls 	

F3B: Sources of long-term funds

What types of funds are available to organisations to finance the implementation of their strategies? How much of each type should they go for? And what is the impact on the organisation? Where and how do they get these funds? And how do they provide incentives to providers of such funds so that the funds are available at the right time, in the right quantities and at the right cost? These are some of the questions covered by this section.

Lead outcome	Component outcome	Topics to be covered	Explanatory notes
1. Evaluate the capital structure of a firm.	Evaluate: a. Choice of capital structure b. Changes in capital structure	<ul style="list-style-type: none"> Capital structure theories (traditional theory and Miller and Modigliani (MM) theories) Calculation of cost of equity and weighted cost of capital to reflect changes in capital structure Impact of choice of capital structure on financial statements Structuring debt/equity profiles of companies in a group 	How should important elements of the financial statement be treated in the books? What principles should underpin these? How do financial reporting standards help to ensure this? Using financial reporting standards terminology this part will be looking at issues of recognition and measurement. The most important issues will be considered here.
2. Analyse long-term debt finance.	Analyse: a. Selecting debt instruments b. Target debt profile c. Issuing debt securities d. Debt covenants e. Tax considerations	<ul style="list-style-type: none"> Types of debt instruments and criteria for selecting them Managing interest, currency and refinancing risks with target debt profile Private placements and capital market issuance of debt Features of debt covenants 	
3. Evaluate equity finance.	a. Evaluate methods of flotation b. Discuss rights issues	<ul style="list-style-type: none"> Methods of flotation and implications for management and shareholders Rights issues, choice of discount rates and impact on shareholders Calculation of theoretical ex-rights price (TERP) and yield adjusted TERP 	
4. Evaluate dividend policy.	Evaluate policy in the following areas: a. Cash dividends b. Scrip dividends c. Share repurchase programmes	<ul style="list-style-type: none"> Features and criteria Impact on shareholder value and entity value, financial statements and performance 	

F3C: Financial risks

There is always a risk that the organisation will not be able to attract enough funds to finance its operations and in extreme conditions will fail to survive as a result. This section covers the sources of such risks and how to evaluate and manage such financial risks appropriately.

Lead outcome	Component outcome	Topics to be covered	Explanatory notes
1. Discuss the sources and types of financial risks.	Discuss: a. Sources of financial risk b. Types of financial risk	<ul style="list-style-type: none"> Economic risk Political risk Currency risk Interest rate risk 	Managing risks related to finances is similar to managing other types of risks in general approach and methodology. However, there are specific differences such as the sources and types of financial risks, how they can be quantified and ways in which they are managed. This section looks at the very specific issues related to managing financial risks within a general risk management framework
2. Evaluate financial risks.	a. Evaluate how financial risks are quantified	<ul style="list-style-type: none"> Theory and forecasting of exchange rates (e.g. interest rate parity, purchasing power parity and the Fisher Effect) Value at risk 	
3. Recommend ways of managing financial risks.	a. Recommend ways to manage economic and political risks b. Discuss currency risk instruments c. Discuss interest rate risk instruments	<ul style="list-style-type: none"> Responses to economic transaction and translation risks Operations and features of swaps, forward contracts, money market hedges, futures and options Techniques for combining options in order to achieve specific risk profile such as caps, collars and floors Internal hedging techniques 	

F3D: Business valuation

The primary objective of all strategic activity is to create and preserve value for organisations. How does the organisation know whether it has succeeded in this objective? Sometimes, in order to implement strategies, organisations have to acquire other organisations. How does the acquirer determine the value of its acquisition? This section covers how to use techniques in business valuation to answer such questions.

Lead outcome	Component outcome	Topics to be covered	Explanatory notes
1. Discuss the context of valuation.	Discuss: <ol style="list-style-type: none"> Listing of firms Mergers and acquisitions (M&A) Demergers and divestments 	<ul style="list-style-type: none"> Reasons for M&A and divestments Taxation implications Process and implications of management buy-outs Acquisition by private equity and venture capitalist 	<p>This section looks at the conditions under which organisations need to calculate their own value or the value of other organisations or sub-units thereof. It introduces candidates to valuation techniques. Of particular importance in the digital world is the valuation of intangibles. This links also to how to report intangible value and their drivers in integrated reporting. In addition, how should digital assets be valued? One of the reasons for valuation is when merging or acquiring firms. How should such deals be structured, implemented and closed? For example what should the forms of the consideration be? What are the terms of the acquisition? How does one enable benefit realisation, particularly for synergies once the acquired organisation has been integrated into the acquiring organisation?</p>
2. Evaluate the various valuation methods.	<ol style="list-style-type: none"> Evaluate different valuation methods Discuss the strengths and weaknesses of each valuation method 	<ul style="list-style-type: none"> Asset valuation Valuation of intangibles Different methods of equity valuation (share prices, earnings valuation, dividend valuation, discounted cash flow valuation) Capital Asset Pricing Model (CAPM) Efficient market hypothesis 	
3. Analyse pricing and bid issues.	Analyse: <ol style="list-style-type: none"> Pricing issues Bid issues 	<ul style="list-style-type: none"> Forms of consideration Terms of acquisition Target entity debt Methods of financing cash offer and refinancing target entity debt Bid negotiation 	
4. Discuss post-transaction issues.	Discuss: <ol style="list-style-type: none"> Post-transaction value Benefit realisation 	<ul style="list-style-type: none"> Post-transaction value incorporating effect of intended synergies M&A integration and synergy benefit realisation Exit strategies 	

Strategic financial objectives

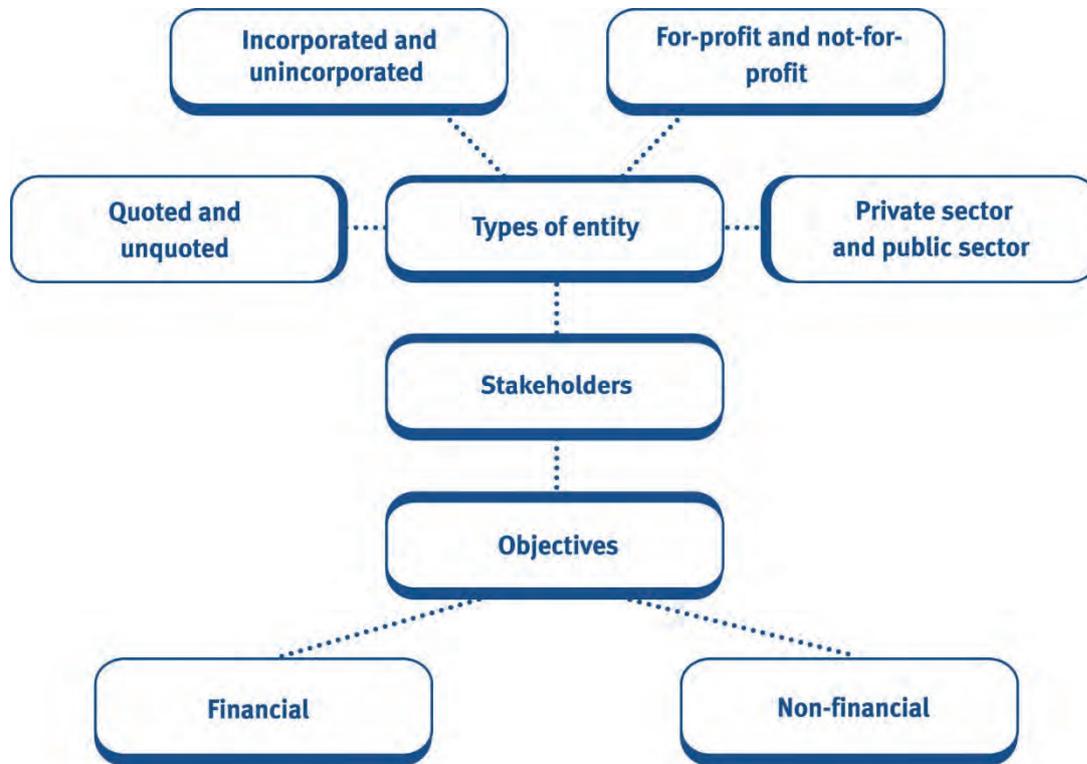
Chapter learning objectives

Lead outcome	Component outcome
A1: Advise on strategic financial objectives	(a) Analyse different types of organisations and their objectives (b) Advise on financial objectives (c) Advise on non-financial objectives

Topics to be covered

- Profit and not for profit (NFP) organisations
- Quoted and unquoted companies
- Private and public sector organisations
- Value for money, maximising shareholder wealth
- Earnings growth and dividend growth
- Impact of underlying economic conditions and business variables on financial objectives

1 Overview of chapter



Definitions of key terms

Mission: Fundamental objective(s) of an entity, expressed in general terms. (CIMA Official Terminology, 2005)

Mission statement: Published statement, apparently of the entity's fundamental objective(s). This may or may not summarise the true mission of the entity. (CIMA Official Terminology, 2005)

Objectives, hierarchy of: Arrangement of the objectives of an entity into a number of different levels, with the higher levels being more general and the lower levels more specific. These levels may be mission, goals, targets or, alternatively: strategic objectives, tactical objectives or operational objectives.



2 The mission and objectives of an entity

The mission and objectives of an entity will differ depending on:

- the type of entity (for example for-profit or not-for-profit)
- the needs of the entity's different stakeholders.

This chapter defines the different types of entity and considers who the entity's key stakeholders are. It then looks at different objectives, both financial objectives and non-financial.



Definitions of different types of entity

For-profit and not-for-profit entities

Most companies operate on a for-profit, or profit seeking basis. This means that their primary objective is to make a profit and therefore to satisfy their shareholders.

Most public sector entities operate on a not-for-profit basis, in that they usually have other primary objectives, often non-financial in nature.

Unincorporated and incorporated entities

An incorporated entity (sometimes called a company or corporation) is legally a separate entity from its owner(s).

Conversely, an owner and an unincorporated entity are legally the same, so the owner personally bears all the risks of the business.

Unincorporated entities are usually sole traders or partnerships.

Quoted and unquoted entities

Once an entity has been incorporated, it can apply to a stock exchange to have its shares quoted (or listed) on the exchange. It can be expensive to secure a stock exchange listing, so only large companies tend to become quoted.

A listing on an exchange makes it much easier for shareholders to buy and sell the entity's shares.

Private sector and public sector entities

A private sector entity is owned by private investors, whereas a public sector entity is owned by the government of a country.

Other types of entity

A **charitable entity (charity)** is a type of not-for-profit entity. It differs from other types of not-for-profit entities in that it centres on not-for-profit and philanthropic goals as well as social well-being (e.g. activities serving the public interest or common good).

An **association** or **union** is a group of individuals who enter into an agreement to form an entity to accomplish a purpose. Common examples include trade associations, trade unions and professional associations (like CIMA).

3 Objectives of different types of entity

It is generally accepted that the primary strategic objective of a for-profit entity (i.e. a commercial company) is the long-term goal of the **maximisation of the wealth of the shareholders**.

Entities such as public sector bodies (e.g. schools, hospitals), charities, trade unions and associations (such as accountancy bodies) are not run to make profits but to benefit prescribed groups of people. For example, the primary objective of a charity is to pursue whatever charitable objectives it was set up for.

Since the services provided are limited primarily by the funds available, secondary objectives are to raise the maximum possible funds each year (net of fund-raising expenses), and to use the funds efficiently to maximise the benefit generated.



Objectives of specific types of entity

There are some interesting extra points to note regarding objectives when we consider the issues facing the following specific types of entity:

Incorporated v unincorporated

An incorporated entity is likely to have several owners, and therefore there is the potential for greater conflict of stakeholder objectives than with an unincorporated entity.

Quoted v unquoted

A quoted company faces far more scrutiny from its many investors and from the financial market in general.

Also, because of this increased scrutiny, it is arguably more important that a quoted company sets appropriate non-financial objectives relating to its relationship with the environment and its staff.

Charities

Charities are usually established to raise money for a specific cause, and to spend the money raised in the most effective way.

However, increasingly charities are setting up retail outlets and trying to generate profits through trading. In some cases, the charities are making investments and therefore taking risks in order to try to increase returns. This sort of strategy used to be associated only with profit seeking organisations and would have once seemed inappropriate behaviour for charities. However, it has become the norm for most charities now.

4 Objectives and stakeholders



Definition of stakeholders

Stakeholders: Those persons and entities that have an interest in the strategy of an entity. Stakeholders normally include shareholders, customers, staff and the local community. (CIMA Official Terminology, 2005)

The decisions made by an entity's managers depend on the ultimate objectives of the entity.

Academic studies have shown that entities often have many, **sometimes conflicting**, objectives.

This is a consequence of having many stakeholders with both long- and short-term goals, such as:

- Equity investors (ordinary shareholders)
- The community at large
- Company employees
- Company managers/directors
- Customers
- Suppliers
- Finance providers
- The government



Stakeholder conflicts

Faced with a broad range of stakeholders, managers are likely to find they cannot simultaneously meet all the stakeholders' objectives.

For example the managers of a for-profit entity will find it difficult to maximise the wealth of their shareholders and keep all the other stakeholders content.

In this case, the main strategic objective may be interpreted as achieving the maximum profit possible, consistent with balancing the needs of the various stakeholders in the entity.

Such a policy may imply achieving a satisfactory return for shareholders, whilst (for example) establishing competitive terms and conditions of service for the employees, and avoiding polluting the environment.



Example of conflicts of objectives – agency theory

Agency theory: Hypothesis that attempts to explain elements of organisational behaviour through an understanding of the relationships between principals (such as shareholders) and agents (such as company managers and accountants). A conflict may exist between the actions undertaken by agents in furtherance of their own self-interest, and those required to promote the interests of the principals. (CIMA Official Terminology, 2005)

Agency theory

A possible conflict can arise when ownership is separated from the day-to-day management of an entity. In larger entities, the ordinary shares are likely to be diversely held, and so the actions of shareholders are likely to be restricted in practical terms. The responsibility of running the entity will be with the board of directors, who may only own a small percentage of the shares in issue.

The managers of an entity are essentially agents for the shareholders, being tasked with running the entity in the shareholders' best interests. The shareholders, however, have little opportunity to assess whether the managers are acting in the shareholders' best interests.

5 For-profit entities

Introduction to objectives of for-profit entities

As stated above, the primary objective of a for-profit entity is the maximisation of shareholder wealth.

However, this objective always has to be balanced with other objectives, driven by the needs of the other key stakeholder groups.

For-profit entities will therefore have a mix of financial and non-financial objectives.

Financial objectives of for-profit entities

The financial objectives of a for-profit entity will be created after considering the following factors:

Equity investors (ordinary shareholders)

Within any economic system, the equity investors provide the risk finance. There is a very strong argument for maximising the wealth of equity investors. In order to attract funds, the company has to compete with other risk-free investment opportunities, e.g. government securities. The shareholders require returns from the company in terms of dividends and increases in share prices.

Finance providers

Providers of loan finance (banks, loan creditors) will primarily be interested in the ability of the firm to repay the finance including interest. As a result it will be the firm's ability to generate cash both long and short term that will be the basis of the goals of these providers.

Risk exposure

Risk can be measured according to finance theory.

Some risks – for example exchange-rate risk and interest-rate risk – can be managed by the use of hedging mechanisms. Shareholders and entities can therefore choose how much risk they wish to be exposed to for a given level of return. However, risk can take many forms, and the theory does not deal with risk exposure to matters such as recruitment of senior personnel or competitor activity.

Directors should set risk policies according to an agreed risk appetite which reflects the risk appetite of the shareholders.

Examples of specific financial objectives of for-profit entities

In order to achieve the overall objective of maximising shareholder wealth, but also to address the other issues identified above, entities should set specific financial targets in order to both communicate direction and measure performance.

For example:

Profitability

e.g. annual 10% improvement in earnings, or earnings per share.

Dividends

e.g. annual 5% increase in dividends.

Cash generation

e.g. annual 10% improvement in operating cash flow.

Gearing

e.g. a maximum $[\text{debt to (debt + equity)}]$ ratio of 40%.

In order to assess whether the entity has achieved its financial objectives, ratio analysis can be used (covered in more detail towards the end of this chapter).



More on financial objectives of for-profit entities

Financial performance indicators

Return to investors

The return from ownership of shares in a profit-making entity can be measured by the formula:

$$\text{Annual return to investors} = \frac{P_1 - P_0 + \text{Dividend}}{P_0}$$

This is the capital appreciation on the shares (the difference between P_1 and P_0 – the share price at the end and the start of the year respectively), plus dividends received during the year. The measure reflects the fact that both share price growth and dividends are important to investors. In fact, investors can still make gains (through the capital appreciation of their shares) even if the entity never pays out a dividend.

Cash generation

Poor liquidity is a greater threat to the survival of an entity than is poor profitability. Unless the entity is prepared to fund growth with high levels of borrowings, cash generation is vital to ensure investment in future profitable ventures. In the private sector the alternative to cash via retained earnings is borrowing.

Value added

This is primarily a measure of performance. It is usually defined as revenues less the cost of purchased materials and services. It represents the value added to an entity's products by its own efforts. A problem here is comparability with other industries – or even with other entities in the same industry.

Profitability

Profitability may be defined as the rate at which profits are generated. It is often expressed as profit per unit of input (e.g. investment). However, profitability limits an entity's focus to one output measure – profit. It overlooks quality, and this limitation must be kept in mind when using profitability as a measure of success. Profitability as a measure of decision-making has been criticised because:

- it fails to provide a systematic explanation as to why one business sector has more favourable prospects than another;
- it does not provide enough insight into the dynamics and balance of an entity's individual business units, and the balance between them;
- it is remote from the actions that create value, and cannot therefore be managed directly in any but the smallest entities;
- the input to the measure may vary substantially between entities.

Nevertheless, it is a well-known and accepted measure which, once the input has been defined, is readily understood. Provided the input is consistent across entities and time periods, it also provides a useful comparative measure.

Return on assets (RoA)

This is an accounting measure, calculated by dividing annual profits by the average net book value of assets. It is therefore subject to the distortions inevitable when profit, rather than cash flows, is used to determine performance. Distorting factors for interpretation and comparison purposes include depreciation policy, inventory revaluations, write-off of intangibles such as goodwill, etc. A further defect is that RoA ignores the time value of money, although this may be of minor concern when inflation is very low.

RoA may not adequately reflect how efficiently assets were utilised: in a commercial context, taking account of profits but not the assets used in their making, for whatever reason, would overstate an entity's performance.

Market share

Market share is often seen as an objective for an entity in its own right. However, it must be judged in the context of other measures such as profitability and shareholder value. Market share, unlike many other measures, can take quality into account – it must be assumed that if customers do not get the quality they want or expect, then the entity will lose market share.

Gaining market share must be seen as a long-term goal of entities to ensure outlets for their products and services, and to minimise competition. However, market share can be acquired only within limits if a monopoly situation is to be avoided.

Competitive position

The performance of an entity must be compared with that of its competitors to establish a strategic perspective. A number of models and frameworks have been suggested by organisational theorists as to how competitive position may be determined and improved. A manager needing to make decisions must know by whom, by how much, and why he is gaining ground or being beaten by competitors.

Conventional measures, such as accounting data, are useful but no one measure is sufficient. Instead, an array of measures is needed to establish competitive position. The most difficult problem to overcome in using competitive position as a success factor is in collecting and acquiring data from competitors.

Non-financial objectives of for-profit entities

The non-financial objectives of a for-profit entity will be created after considering the following stakeholder issues:

Company employees

Returns = wages or salaries. However, maximising the returns to employees does assume that finance can be raised purely on the basis of satisficing the returns to finance providers. The employees' other interests also include job security and good conditions of employment.

Company managers/directors

Such senior employees are in an ideal position to follow their own aims at the expense of other stakeholders. Their goals will be both long-term (defending against takeovers, sales maximisation) and short-term (profit margins leading to increased bonuses).

Suppliers

Suppliers to the organisation will have short-term goals such as prompt payment terms alongside long-term requirements including contracts and regular business. The importance of the needs of suppliers will depend upon both their relative size and the number of suppliers.

The government

The government will have political and financial interests in the firm. Politically it will wish to increase exports and decrease imports whilst monitoring companies via the competition authorities. Financially it requires long-term profits to maximise taxation income.

The community at large

The goals of the community will be broad but will include such aspects as legal and social responsibilities, pollution control and employee welfare.

Environmental concerns

In pursuit of shareholder wealth maximisation, historically decisions have often been made that led to pollution or other environmental problems. Increasingly, entities are becoming aware of their environmental responsibilities. Many entities now produce environmental reports alongside their financial statements to emphasise their commitment to environmental issues. This is covered in more detail in Chapter 2: 'Integrated Reporting'.

Customer pressure

Entities are increasingly coming under pressure from knowledgeable customers. Customers are more and more keen to ensure that entities they trade with behave ethically and responsibly. Therefore, decision makers have to take account of customers' wishes, even if there appears to be a short-term conflict with the shareholder wealth maximisation objective.

Customer satisfaction

If customers are not satisfied they will take their business elsewhere and the entity will lose market share and go into liquidation. Measuring customer satisfaction is difficult to do formally, as the inputs and outputs are not readily defined or measurable. Surveys and questionnaires may be used but these methods have known flaws, mainly as a result of respondent bias.

Examples of specific non-financial objectives of for-profit entities

Non-financial objectives can be used to direct managers' attention towards key stakeholder requirements, to ensure that the entity balances the needs of its different stakeholders and minimises the conflict between the different stakeholder groups.

Also, achievement of non-financial objectives can improve the image of the entity from the perspective of its stakeholders. This can have a knock-on effect on sales and profitability and hence can help to create additional wealth for shareholders in the longer term.

Non-financial objectives can be categorised under the following headings:

Human

This considers the relationship of the entity with its staff, so objectives could cover increasing the amount of training provided, or reducing the level of staff turnover

Intellectual

This considers the intangible assets of the entity, such as its brand and reputation. Objectives could focus on improving the brand recognition.

Natural

This considers the entity's responsibility towards the environment, so objectives might include reducing the level of pollution and increasing the amount of recycling.

Social

This considers the entity's responsibility towards its local community. A social objective could be to make sure at least 50% of the employees live within a 5 mile radius of the entity's premises.

Relationship

This considers the entity's responsibility towards key stakeholders such as suppliers and customers. A relationship objective could be to pledge to offer all suppliers longer term contracts and to pay them on time, in order to improve the relationships.

6 Not-for-profit entities

Objectives of not-for-profit entities

Not-for-profit entities such as public sector bodies (e.g. schools, hospitals), charities, trade unions and associations (such as accountancy bodies) are not run to make profits but to benefit prescribed groups of people. For example, the primary objective of a charity is to pursue whatever charitable objectives it was set up for.

Since the services provided are limited primarily by the funds available, secondary objectives are to raise the maximum possible funds each year (net of fund-raising expenses), and to use the funds efficiently to maximise the benefit generated.

This can be measured as the 'value for money' (VFM) generated.

Satisfying many different stakeholders

Before we look at VFM in detail, it is worth noting that not-for-profit entities will still have a mix of financial and non-financial objectives (just like for-profit entities discussed above) and will still have to try to satisfy many different stakeholder groups.

There will often be different views of what the objectives of a not-for-profit entity should be, and therefore, whether appropriate objectives have been achieved. What value does one put on curing an illness, or saving a life? Should the success of a hospital be measured by shorter waiting lists? These are societal matters, the discomfort being one of the reasons they are placed firmly in the public sector, rather than being left to the 'survival of the fittest' philosophy associated with the competitive markets.

A public sector college will set objectives relating to the number of students, the number of courses, the ratio of lecturers to students, and so on. It will also seek its customers' assessments of the standard of, for example its lecturing and catering, and compare them with preset targets. In the language of strategic financial management, these are answers to the question 'How well did we do what we chose to do?' that is, 'how **effective** were we in meeting the objectives?'



Public sector entities

Public sector entities are bodies such as nationalised industries and local government organisations. They represent a significant part of many countries' economies and sound financial management is essential if their affairs are to be conducted efficiently. The major problem here lies in obtaining a measurable objective.

Financial objectives in the public sector

For a stock market listed company we can take the maximisation of shareholder wealth as a working objective and know that the achievement of this objective can be monitored with reference to share price and dividend payments. For a public sector entity the situation is more complex.

The entity's mission statement will lay out its key objectives. However, generally such entities are run in the interests of society as a whole and therefore we should seek to attain the position where the gap between the benefits they provide to society and the costs of their operation is the widest (in positive terms).

The cost is relatively easily measured in accounting terms. However, many of the benefits are intangible. For example, the benefits of such bodies as the National Health Service or Local Education Authorities are almost impossible to quantify.

Such government organisations tend to use a low discount rate in investment appraisals (to take account of 'time preference') and have complex methods of quantifying non-financial benefits in a standard NPV analysis.

Economists have tried to evaluate many public sector investments through the use of cost benefit analysis, with varying degrees of success. Problems are usually encountered in evaluating all the benefits.

Regulation

It is worth remembering that organisations that have had a public sector history or are themselves natural monopolies are often regulated in order to ensure the public are not the victims of the monopoly power these companies enjoy. This regulation can take many forms but can include the capping of the selling prices, the taxing of super profits or simply a limit on the profits these entities are allowed to make.



Specific objectives of public sector entities

Traditionally, managers have focused on financial measures of performance and progress, but increasingly, entities in both the private and public sectors are using non-financial indicators to assess success across a range of criteria, which need to be chosen to help an entity meet its objectives.

A number of common objectives are discussed below, in the context of public sector entities.

Cash generation

Poor liquidity is a greater threat to the survival of an entity than is poor profitability. Unless the entity is prepared to fund growth with high levels of borrowings, cash generation is vital to ensure investment in future profitable ventures. In the private sector the alternative to cash via retained earnings is borrowing.

In the public sector this choice has not been available in the past, and all growth has been funded by government. However, in the face of government-imposed cash limits, local authorities and other public-sector entities are beginning to raise debt on the capital markets, and are therefore beginning to be faced with the same choices as profit-making entities.

Value added

Value added represents the value added to an entity's products by its own efforts.

A problem here is comparability with other industries – or even with other entities in the same industry.

Many public sector entities – for example those in the health service – are now publishing information on their own value added.

Profitability

Although the concept of profit in its true sense is absent from most of the public sector, profitability may be used to relate inputs to outputs if a different measure of output is used – for example: surplus after all costs, to capital investment.

Return on assets (RoA)

In the public sector, the concept of profit is absent, but it is still not unrealistic to expect entities to use donated assets with maximum efficiency. If depreciation on such assets were to be charged against income, this would depress the amount of surplus income over expenditure. Other points which may affect interpretation of RoA in the public sector are:

- difficulty in determining value;
- there may be no resale value;
- are for use by community at large;
- charge for depreciation may have the effect of 'double taxation' on the taxpayer.

Market share

Market share is a measure that is becoming increasingly relevant to the public sector – for example universities and health provision. Health providers must now 'sell' their services to trusts established to 'buy' from them. Those providers which are seen to fail their customers will lose market share as the trusts will buy from elsewhere (within certain limits).

Competitive position

The public sector is increasingly in competition with other providers of a similar service both in the private and public sectors.

For example hospitals now have to compete for the funds of health trusts. Their advantage is that it is easier to gain access to data from such competitors than it is in the private sector.

Risk exposure

Public sector entities tend to be risk averse because of the political repercussions of failure and the fact that taxpayers, unlike shareholders, do not have the option to invest their money in less (or more) risky ventures.

Assessing value for money in not-for-profit entities

Not-for-profit entities are often appraised according to the 'value for money' (VFM) that they generate.

Value for money may be defined as "performance of an activity in such a way as to simultaneously achieve economy, efficiency and effectiveness." (CIMA Official Terminology, 2005)

This means making the optimum use of available resources to achieve the intended outcome.

VFM has three constituent elements:

Economy: minimising the cost of resources used or required (inputs) – spending less

Efficiency: the relationship between the output from goods or services and the resources to produce them – spending well

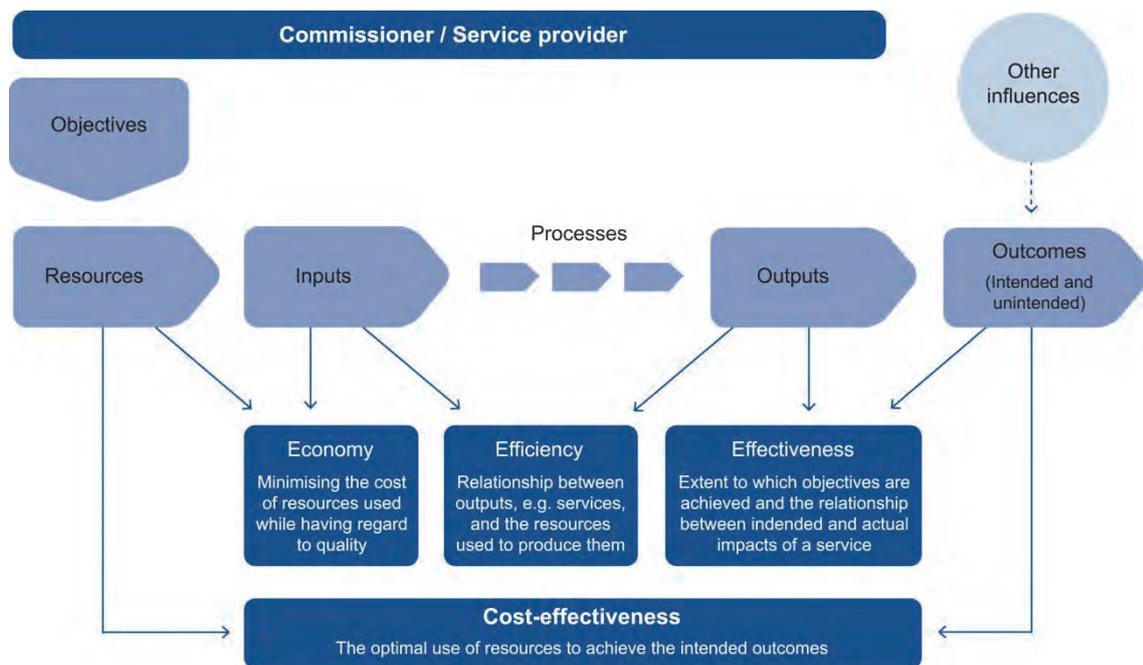
Effectiveness: the relationship between the intended and actual results of public spending (outcomes) – spending wisely.

These elements can be referred to by the umbrella term '**cost effectiveness**'.

Besides these three 'Es, a fourth 'E' is applied in some places:

Equity: the extent to which services are available to and reach all people that they are intended to – spending fairly. Some people may receive differing levels of service for reasons other than differences in their levels of need.

Overview of VFM



Source: UK National Audit Office website



More detail on VFM

Measurement of VFM

In practice, value for money is difficult to measure, and it is a relative rather than an absolute measure.

Value for money audit or study

A value for money audit is defined as an "investigation into whether proper arrangements have been made for securing economy, efficiency and effectiveness in the use of resources." (CIMA Official Terminology, 2005)

A value for money study focuses on a specific area of expenditure, and seeks to reach a judgement on whether value for money has been achieved. Good value for money can be defined as the optimal use of resources to achieve the intended outcomes.

The purpose of a VFM study is not to question policy objectives, but to provide independent and rigorous analysis on the way in which money has been spent to achieve those policy objectives.

As well as reaching an overall conclusion on value for money, a VFM study will make recommendations on how to achieve better value for money and to improve the services under examination. In some circumstances, a follow-up study is conducted to measure progress against the recommendations made.

Typically, a study will use a mix of quantitative and qualitative methods. The methods commonly used include:

- Financial analysis
- Analysis of management information
- Interviews or focus groups with departmental and other staff
- General research
- Surveys of practitioners or service users
- Benchmarking with other organisations or other countries.

Real world difficulties

In reality, a VFM audit will usually focus on either effectiveness or on economy and efficiency. This is because the two sides of VFM are often in partial conflict; you can have a better service (but spend more) or a cheaper service (often of lower quality). Therefore the different elements are typically looked at within separate VFM audits.



Illustration 1 – A practical example of VFM

Practical example: Value for money (taken from the website of the UK National Audit Office)

A local authority sets up a new programme to reduce litter dropping. One of its early steps is to agree with stakeholders a set of outcomes for the programme. The effectiveness of the programme is to be judged on the extent to which it reaches its outcomes in a year.

In this case, the programme achieves 97% of its outcomes and councillors declare they have 'come within a whisker of winning the battle against litter'. The programme was effective.

However, the programme cost more than expected and overspent its budget by 25 per cent. This was because the programme managers allowed costs to over-run in their drive to meet the outcome. The programme was not economical.

The cost over-run prompts a review of the service. This concludes that, outcome for outcome, it was more expensive than similar programmes in neighbouring areas. The programme was not efficient.

If programme objectives had been exceeded sufficiently, the programme may have been cost-effective despite the overspend. However, programme managers could still be criticised for exceeding the budget.

The most disadvantaged parts of the area were also those with the biggest litter problems and these neighbourhoods improved more, from a lower base, than wealthier places. The programme was equitable.

Note how effectiveness (achieving the outcomes) partly conflicted with the economy and efficiency (high overspends and cheaper projects in other regions).

7 International operations

Increasingly in the modern business environment, entities are expanding across national boundaries into many different countries.

Although there are risks associated with such strategies, the strategic and financial benefits to an entity can be enormous.

In many ways, the objectives of an entity trading internationally will be the same as those of an entity based in just one country. However, there are some additional considerations.

Strategic implications of international expansion

The main strategic implications of international expansion are:

Competition

Foreign markets may have weaker competition. A firm facing a competitive domestic market will benefit from finding a foreign market where it has a monopoly.

Country factors

Some countries have cheap sources of natural raw materials and cheap labour costs. Locating production facilities in these countries will bring significant cost savings. Also, some countries' governments offer grants and cheap loans to foreign investors to attract inward investment.

Benefits to the customer

Locating in a different country could move an entity closer to existing customers, so reducing delivery times and improving relationships. Also, it is likely to bring an entity closer to a pool of potential new customers.

Economies of scale

As the entity gets bigger, international expansion might be the best way of continuing to generate economies of scale.

Risk management

International expansion will leave an entity less exposed to a single economy. Factors such as interest rates, inflation, government policy and exchange rates from more than one economy will impact a business with international operations. This will reduce the economic and political risk to the entity.

Financial implications of international expansion

The primary corporate objective – to maximise shareholder wealth – has been referred to earlier in this chapter.

The main financial benefit of an international investment is the positive NPV and consequent gain to shareholders of undertaking an attractive project.

However, also consider the following other financial implications of international investment:

Impact on the financial statements

If the foreign project assets are denominated in foreign currency, they will have to be converted into the domestic currency for the purposes of consolidation. If exchange rates fluctuate from one year to the next, the value of these assets will also fluctuate, giving (unrealised) exchange gains or losses in the entity's accounts. This is known as translation risk, however it does not impact the actual cash flows of the business and is often left unmitigated.

Impact on the cost of capital

International investments will often be more risky to an entity than its normal domestic investments. Therefore, it is likely that the entity's cost of capital will change to reflect this increased risk.

8 Financial performance evaluation

Introduction

Investors (both shareholders and lenders) will often appraise the financial performance of an organisation, to assess whether the organisation represents a good investment. If it is shown that the organisation's financial performance is declining, the shareholders may decide to sell their shares, and the lenders might change their assessment of the organisation's creditworthiness.

In an exam question, you might also be asked to use ratio analysis to assess whether an entity has met its financial objectives.



To appraise financial performance, it is necessary to first calculate ratios under the following headings:

- profitability ratios,
- lender ratios,
- investor ratios.

The calculation of these ratios is covered in the rest of this chapter.

However, as well as performing the calculations, it will also be important to be able to interpret the figures, so you will find detailed explanations of how to interpret the ratios throughout.

9 Profitability ratios

Several profit figures (gross profit, operating profit, net profit) can be identified in a typical statement of profit or loss.

Profitability is a key performance indicator for an entity. In order to assess performance accurately, it is important to compare figures consistently from one year to the next.



Definitions of different profit figures

Profit figures in the statement of profit or loss

Gross profit = Sales – Cost of Sales

$$\text{Gross profit margin} = \frac{\text{Gross profit}}{\text{Revenue}} \times 100$$

Generally, a high profit margin is perceived to be indicative of good performance.

Operating profit = profit from the trading activities of an entity i.e. sales – operating costs, but before finance costs (interest) and tax.

Net profit = Profit after deduction of the finance costs (interest) and tax

EBITDA

EBITDA is an acronym for earnings before interest, tax, depreciation and amortization. In recent years many large entities have adopted EBITDA as a key measure of financial performance. Sceptics suggest that they do this in order to publicise a higher measure of earnings than profit from operations (this type of measurement is sometimes cynically referred to as EBB – earnings before the bad bits).

However, it does make some sense to measure EBITDA, provided that the user fully understands what is included and what is left out. Depreciation and amortization are accounting adjustments, not representing cash flows that are determined by management. It can therefore be argued that excluding these items in assessing earnings eliminates a major area where management bias can operate. Unfortunately, EBITDA is consequently often misunderstood as being a measurement of cash flow, which of course it is not. Even though two categories of non-cash adjustment are eliminated, financial statements are prepared on an accruals basis. EBITDA makes no adjustments in respect of accruals or working capital movements, and so is emphatically not a cash flow measurement.



There are two measures critical to any analysis of profitability:

- 1 **Return on Capital Employed (ROCE)**
- 2 **Return on Equity (ROE)**

Return on capital employed (ROCE)

Return on capital employed (ROCE) is a measurement that is frequently used in the analysis of financial statements.

It shows the overall performance of the entity, expressed as a percentage return on the total investment. It measures management's efficiency in generating profits from the resources available.

ROCE is expressed as a percentage, and is calculated as follows:

$$\text{ROCE} = \frac{\text{Operating profit}}{\text{Capital employed}} \times 100$$

where Capital employed = The total funds invested in the business, i.e. shareholders' funds + long term debt, or total assets less current liabilities.

Return on equity (ROE)

ROE gives an indication as to how well the company has performed in relation to its shareholders, the most important stakeholder.

ROE is expressed as a percentage, and is calculated as follows:

$$\text{ROE} = \frac{\text{Net profit}}{\text{Equity}} \times 100$$

where Equity = The book value of shareholders' funds

It is useful to compare the ROE to the ROCE to measure the amount of the return underlying the business that pertains to the shareholder. Note, however, that they are not directly comparable, ROE being based on net profit and ROCE based on operating profit.



Asset turnover

$$\text{Asset turnover} = \frac{\text{Revenue}}{\text{Capital employed}}$$

This calculation is usually expressed as a simple ratio, rather than as a percentage. It shows how much revenue is produced per \$ of investment in capital employed.

Return on capital employed – Further analysis

When trying to analyse ROCE, it can be useful to break it down as follows into two component ratios:

ROCE = Operating profit margin × Asset turnover

The relationship becomes clear when we put the ratio calculations into the formula:

$$\frac{\text{Operating profit}}{\text{Capital employed}} \times 100 = \frac{\text{Operating profit}}{\text{Revenue}} \times 100 \times \frac{\text{Revenue}}{\text{Capital employed}}$$

Analysing the component ratios may throw some light on the cause of a change in ROCE.

For example, a fall in ROCE could be caused by:

- generating lower sales from the company's capital (lower asset turnover), and/or
- generating a lower profit margin on the sales which have been achieved (lower operating profit margin).



Test your understanding 1 (Integration question)

A company is considering two funding options for a new project. The new project may be funded by GBP10m of equity or debt. Below are the forecast financial statements reflecting both methods of funding.

Statement of financial position extract

	Equity	Debt
	GBPm	GBPm
Long term liabilities (10% bonds)	0.0	10.0
Capital		
Share capital (50 pence)	11.0	3.5
Share premium	4.0	1.5
Reserves	5.0	5.0
	<u>20.0</u>	<u>10.0</u>

Statement of profit or loss extract

	GBPm
Revenue	100.0
Gross profit	20.0
Less expenses (excluding finance charges)	<u>(15.0)</u>
Operating profit	<u>5.0</u>

Corporation tax is charged at 30%.

Required:

- Calculate the operating profit margin and the asset turnover.
- Calculate Return on Capital Employed and Return on Equity, and compare the financial performance of the company under the two funding methods.
- What is the impact on the company's performance of financing by debt rather than equity?



Interpretation of profitability ratios

In general terms, high levels of profitability are desirable.

An entity with high profit margins and a high ROCE is usually perceived to be performing well. Similarly, if the ratios grow over time, this is usually perceived to be positive.

The ideal value for the profitability ratios will vary from industry to industry, so be sure to compare the figures to previous years and to other similar businesses if possible.

10 Lender ratios



Definition of gearing

CIMA's Official Terminology provides the following definition of gearing: "... the relationship between an entity's borrowings, which includes both prior charge capital and long-term debt, and its shareholders' funds."



Gearing is the mix of debt to equity within a firm's permanent capital. There are two particularly useful measures:

- 1 Capital gearing – a statement of financial position (balance sheet) measure.
- 2 Interest cover – a statement of profit or loss measure.

Capital gearing – a measure of capital structure

There are two key measures of capital gearing:

$$\text{Capital gearing} = \frac{\text{Debt}}{\text{Equity}} \times 100$$

$$\frac{\text{Debt}}{\text{Debt} + \text{Equity}} \times 100$$

The calculation of capital gearing can be done in a number of different ways. In the exam, you'll be told which formula to use.

The most commonly used formula in practice and in the exam is debt/(debt + equity) i.e. the second formula here.

Constituent elements of debt and equity

Debt includes redeemable preference shares, bank borrowings and bonds (overdrafts may be included if they are long-term finance sources).

Equity includes ordinary and irredeemable preference shares (plus reserves if the valuation is at book value).

Market values and book values

Wherever possible, market values should be used in preference to book values for the capital gearing ratio.

When using market values, care must be taken when calculating the market value of equity:

When equity is valued using book values it must include any reserves and retained profits that are attributable to the ordinary shareholders that is:

Book value of equity = ordinary share capital + reserves

When market values are used, reserves must be excluded since they are considered to be already incorporated into the market price of the shares, that is:

Market value of equity = Number of shares × Share price



Interest cover

The interest cover ratio indicates the number of times profits will cover the interest charge; the higher the ratio, the better.

$$\text{Interest cover} = \frac{\text{Profit before interest and tax}}{\text{Interest payable}}$$

The interest cover ratio is used by lenders to determine the vulnerability of interest payments to a drop in profit.

As an alternative to the formula shown here, investors often use EBITDA rather than profit before interest and tax in the formula, because EBITDA is a better approximation to the cash generated by the business (and available to pay interest with).



The debt ratio

Another useful ratio is the ratio of long-term debt to total assets, which is calculated as follows:

$$\text{Debt ratio} = \frac{\text{Total long term debt}}{\text{Total assets}}$$

This can provide very useful information for creditors as it measures the availability of assets in the business in relation to the total debt.


Test your understanding 2 (Integration question)
Statement of financial position for X Co

	USDm
Non-current assets (total)	23.0
Current assets (total)	15.0
TOTAL ASSETS	38.0
Equity and Liabilities	
Ordinary share capital	10.0
Ordinary share premium	4.0
Preference share capital (irredeemable)	1.5
Reserves	1.5
Non-current liabilities	
10% bonds	8.0
Current liabilities	
Trade creditors	8.0
Bank overdraft	5.0
TOTAL EQUITY & LIABILITIES	38.0

X Co statement of profit or loss extract

	USDm
Operating profit (PBIT)	4.0
Finance Charges	(1.0)
	<hr/>
Profit before tax (PBT)	3.0
Tax @ 30%	(0.9)
	<hr/>
Net profit	2.1
	<hr/>

Required:

- (a) Calculate the interest cover for X Co, and the capital gearing ratio (on the assumption that the overdraft is to be used in the long term so should be included within debt).
- (b) Comment on the results of your calculations in part (a).

11 Investor ratios

Investors will wish to assess the performance of the shares they have invested in (against competing entities in the same sector, against the market as a whole, and over time).

There are a number of ratios which will be of specific interest to investors (both debt investors and equity investors).

**Market price per share**

The market price per share used throughout the following ratio formulae is the ex-dividend market price.

Ex-dividend means that in buying a share today, the investor will not participate in the forthcoming dividend payment.

Sometimes in an examination, the market price may be quoted cum-dividend which means with dividend rights attached. Here the investor will participate in the forthcoming dividend if purchasing the share today. Arguably the investor will be willing to pay a higher price for the share, knowing that a dividend payment is forthcoming in the near future.

The relationship between the cum-dividend price and the ex-dividend price is then:

Ex-dividend market price = Cum-dividend market price – Forthcoming dividend per share.

Earnings per share (EPS)

Before we can calculate any ratios we need to calculate a key measure of return, the Earnings per share (EPS).

$$\text{EPS} = \frac{\text{Earnings}}{\text{Number of ordinary shares in issue}}$$

where Earnings = Profit distributable to ordinary shareholders, i.e. after interest, tax and any preference dividend.

**More details on EPS**

An important point to remember is that EPS is a historical figure and can be manipulated by changes in accounting policies, mergers or acquisitions, etc.

Market analysts and company executives occasionally appear obsessed about EPS as a performance measure, an obsession which many think is quite disproportionate to its true value.

It is future earnings which should concern investors, a figure far more difficult to estimate.

**P/E ratio**

The P/E ratio is a measure of growth; it compares the market value (a measure of future earnings) to the current earnings.

$$\text{P/E ratio} = \frac{\text{Current share price}}{\text{EPS}}$$

or, alternatively, Total market capitalisation/Total earnings.

The higher the P/E ratio, the greater the market expectation of future earnings growth. This may also be described as market potential.

Earnings yield

The P/E ratio is the reciprocal (in maths, a number or quantity divided into 1) of the earnings yield.

$$\text{Earnings yield} = \frac{\text{EPS}}{\text{Current share price}}$$

or, alternatively, Total earnings/Total market capitalisation.

The market price will incorporate expectations of all buyers and sellers of the entity's shares, and so this is an indication of the future earning power of the entity.

Dividend-payout rate

The cash effect of payment of dividends is measured by the dividend-payout rate.

$$\text{Payout rate} = \frac{\text{Dividend per share}}{\text{EPS}}$$

or, alternatively, Total dividend/Total earnings.

The relationship between the above investors' ratios is usually that an entity with a high P/E ratio has a low dividend payout ratio as the high growth entity needs to retain more resources in the entity. A more stable entity would have a relatively low P/E ratio and higher dividend-payout ratio.

When analysing financial statements from an investor's point of view it is important to identify the objectives of the investor. Does the investor require high capital growth and high risk, or a lower risk, fixed dividend payment and low capital growth?



Dividend yield

This is the relationship of the dividend paid to the current market value of a share.

$$\text{Dividend yield} = \frac{\text{Dividend per share}}{\text{Current share price}}$$

or, alternatively, Total dividend/Total market capitalisation.

However, the dividend represents only part of the overall return from a share.

The other part of the return is the capital gain from an increase in the value of the share. The capital gain from a share may well be far more significant than the dividend.

Dividend cover

Dividend cover measures the ability of the entity to maintain the existing level of dividend and is used in conjunction with the dividend yield.

$$\text{Dividend cover} = \frac{\text{Earnings per share}}{\text{Dividend per share}}$$

or, alternatively, Total earnings/Total dividend.

The higher the dividend cover the more likely it is that the dividend yield can be maintained.

Dividend cover also gives an indication of the level of profits being retained by the entity for reinvestment by considering how many times this year's dividend is covered by this year's earnings.



Test your understanding 3 (Integration question)

Lilydale Co has 5m ordinary shares in issue. Its results for the year are:

	USD000
Profit before tax	750
Tax	(150)
Profit after tax (PAT)	600
Ordinary dividend – proposed	(150)
Retained profit	450

The market price per share is currently 83 cents cum-dividend.

Required:

Calculate the following ratios:

- Price/earnings ratio
- Dividend payout rate
- Dividend yield, and
- Dividend cover.

Earnings growth and dividend growth

An analysis of growth rates of earnings and dividends can enable investors to make an assessment of the performance of an entity.

High growth rates in earnings and dividends are usually viewed positively.

Calculations

The growth rate for a single year is:

$$[(\text{current figure}/\text{last year's figure}) - 1] \times 100\%$$

Over a number of years (n), the implied compound annual growth rate is:

$$[\sqrt[n]{(\text{current figure}/\text{earliest year's figure})} - 1] \times 100\%$$

So for example, if earnings per share have grown from \$0.28 to \$0.33 over a 4 year period, the implied compound annual growth rate is:

$$[\sqrt[4]{(0.33/0.28)} - 1] \times 100\% = 4.19\% \text{ per year}$$



Test your understanding 4 (Objective test question)

ALB Co has the following financial objectives:

- to achieve an average earnings growth of at least 6% per annum
- to keep its gearing, measured as $[\text{debt}/(\text{debt} + \text{equity})]$ by market value, below 35%

In the last three years, ALB Co's operating profit has grown from \$4.0 million to \$4.6 million, and its profit after tax has grown from \$2.3 million to \$2.9 million.

ALB Co has 1 million \$1 shares in issue, trading at \$1.88, and \$1,000,000 of bonds, trading at \$106 per cent.

Which of the objectives has ALB Co achieved?

- A Both objectives
- B Just the gearing objective
- C Just the earnings growth objective
- D Neither objective

12 Sensitivity of the attainment of financial objectives to changes in economic and business variables

Changes to economic and business variables

When economic variables (such as inflation rates and interest rates) and / or business variables (such as margins and volumes) change, it is important to be able to assess the likely impact on the entity and its chances of achieving its financial objectives.

For example a change in interest rates in the economy might cause an entity's financing costs to rise, and therefore might make it more difficult for the entity to achieve a profitability target.



More detail on interest rates and inflation

The effects of interest rate changes

Changes in interest rates affect the economy in many ways. The following consequences are the main effects of an increase in interest rates:

Spending falls – expenditure by consumers, both individual and business, will be reduced. This occurs because the higher interest rates raise the cost of credit and deter spending. If we take incomes as fairly stable in the short term, higher interest payments on credit cards/mortgages, etc., leave less income for spending on consumer goods and services. This fall in spending means less aggregate demand in the economy and thus unemployment results.

Asset values fall – the market value of financial assets will drop, because of the inverse relationship (between bonds and the rate of interest) explained earlier. This, in turn, will reduce many people's wealth. It is likely that they will react to maintain the value of their total wealth and so may save, thereby further reducing expenditure in the economy. This phenomenon seems to fit the UK recession of the early 1990s when the house-price slump deepened the economic gloom. For many consumers today a house, rather than bonds, is their main asset.

Foreign funds are attracted into the country – a rise in interest rates will encourage overseas financial speculators to deposit money in the country's banking institutions because the rate of return has increased relative to that in other countries. Such funds could be made available as loans to firms in that country by the banking sector.

The exchange rate rises – the inflow of foreign funds raises demand for the domestic currency and so pushes up the exchange rate. This has the benefit of lowering import prices and thereby bearing down on domestic inflation. However, it makes exports more expensive and possibly harder to sell. The longer-term effect on the balance of payments could be beneficial or harmful depending on the elasticity of demand and supply for traded goods.

Inflation falls – higher interest rates affect the rate of inflation in three ways. First, less demand in the economy may encourage producers to lower prices in order to sell. This could be achieved by squeezing profit margins and/or wage levels. Second, new borrowing is deferred by the high interest rates and so demand will fall. Third, the higher exchange rate will raise export prices and thereby threaten sales which in turn pressurises producers to cut costs, particularly wages. If workers are laid off then again total demand is reduced and inflation is likely to fall.

The effects of inflation

Inflation is defined simply as 'rising prices' and shows the cost of living in general terms.

If the rate of inflation is low, then the effects may be beneficial to an economy. Business people are encouraged by fairly stable prices and the prospect of higher profits. However, there is some argument about whether getting inflation below 3% to, say, zero, is worth the economic pain (of, say, higher unemployment). There is agreement, though, that inflation above 5% is harmful – worse still if it is accelerating. The main arguments are that such inflation:

Distorts consumer behaviour – people may bring forward purchases because they fear higher prices later. This can cause hoarding and so destabilise markets, creating unnecessary shortages.

Redistributes income – people on fixed incomes or those lacking bargaining power will become relatively worse off, as their purchasing power falls. This is unfair.

Affects wage bargainers – trades unionists on behalf of labour may submit higher claims at times of high inflation, particularly if previously they had underestimated the future rise in prices. If employers accept such claims this may precipitate a wage–price spiral which exacerbates the inflation problem.

Undermines business confidence – wide fluctuations in the inflation rate make it difficult for entrepreneurs to predict the economic future and accurately calculate prices and investment returns. This uncertainty handicaps planning and production.

Weakens the country's competitive position – if inflation in a country exceeds that in a competitor country, then it makes exports less attractive (assuming unchanged exchange rates) and imports more competitive. This could mean fewer sales of that country's goods at home and abroad and thus a bigger trade deficit. For example the decline of Britain's manufacturing industry can be partly attributed to the growth of cheap imports when they were experiencing high inflation in the period 1978–1983.

Redistributes wealth – if the rate of interest is below the rate of inflation, then borrowers are gaining at the expense of lenders. The real value of savings is being eroded. This wealth is being redistributed from savers to borrowers and from payables to receivables. As the government is the largest borrower, via the national debt, it gains most during inflationary times.

Interest rate parity theory

In economic theory, the impact of interest rates on the expected exchange rate is given by the interest rate parity theory.

Interest rate parity formula

$$F_0 = S_0 \times \frac{(1 + r_{\text{var}})}{(1 + r_{\text{base}})}$$

where

S_0 = spot rate of exchange

F_0 = forward rate of exchange

r_{var} and r_{base} are the interest rates associated with the variable and base currencies respectively. For example, if an exchange rate is quoted as GBP/USD 1.65 (i.e. GBP 1 = USD 1.65) then the GBP is the base currency and the USD is the variable one.

The interest rate parity theory shows that the forward rate of exchange can be found by adjusting the spot rate of exchange to reflect the differential in interest rates between the two countries.



Test your understanding 5 (Objective test question)

BBL Co is based in country G, where the functional currency is the G\$.

Some of BBL Co's suppliers are based in the UK, and they invoice BBL Co in British pounds (GBP). Therefore, the directors of BBL Co keep a close eye on the exchange rate between the G\$ and the GBP, and they use the interest rate parity theory to estimate the likely future exchange rates.

The current spot rate is G\$/GBP 1.88 (that is G\$ 1 = GBP 1.88), and the expected interest rates in the UK and country G respectively are 5% and 8% over the next year.

What is the forecast spot rate in one year's time using the interest rate parity theory and assuming that the current forward rate is the best forecast of the future spot rate?

- A G\$/GBP 1.18
- B G\$/GBP 1.83
- C G\$/GBP 1.93
- D G\$/GBP 3.01



Test your understanding 6 (Objective test question)

The financial director of JW Co is attempting to estimate the likely exchange rate in 1 years' time, so that he can assess the likely value of the entity's foreign currency income.

JW Co is based in country C (functional currency C\$) and it makes some sales in the USA, denominated in US dollars (USD). Sales in 1 year's time are expected to be USD 400,000.

The spot rate of exchange is C\$/USD 23.35 (that is C\$ 1 = USD 23.35). Interest rates in the USA and country C are expected to be 2% and 6% respectively over the next year.

What is the expected exchange rate in 1 years' time, using the interest rate parity theory, and what is the expected value of the USD sales when translated into C\$?

- A Exchange rate: C\$/USD 24.27, value of sales: C\$ 9.708 million
- B Exchange rate: C\$/USD 24.27, value of sales: C\$ 16,481
- C Exchange rate: C\$/USD 22.47, value of sales: C\$ 8.988 million
- D Exchange rate: C\$/USD 22.47, value of sales: C\$ 17,802

Interest rate parity and other similar theories are covered in more detail in Chapter 9: 'Currency risk management'.

The impact on financial ratios of changes in interest rates, exchange rates and inflation

A change in economic variables such as interest rates, exchange rates and inflation can have an impact on an entity's ability to meet its objectives.

For example, a change in exchange rates could impact selling prices and hence profitability ratios, and could prevent an entity from achieving an earnings objective.

If you are asked in the exam to assess the likelihood of an entity achieving a given objective, you should revise the financial statements to reflect the expected change and then recalculate the necessary ratios.



Test your understanding 7 (Objective test question)

Tillman Co is an unquoted manufacturing company based in country T, whose functional currency is the T\$.

Extracts from its most recent financial statements are shown below:

Statement of profit or loss extract

	T\$ m
Revenue	100.0
Gross profit	20.0
Less expenses (excluding finance charges)	(15.0)
	<hr/>
Operating profit	5.0
	<hr/>

Corporation tax is charged at 30%.

Tillman has T\$ 8 million of long term borrowings, on which it paid interest of 10% last year, and it has 20 million T\$ 1 shares in issue.

Tillman Co expects its interest rate to rise by two percentage points next year (to 12%). Also, a strengthening of the currency in Tillman Co's main export market will cause the T\$ value of Tillman Co's gross profit to rise to T\$ 25 million next year.

What is the likely impact on Tillman Co's earnings per share (EPS), assuming that all other factors remain the same next year?

- A Increase by 20%
- B Increase by 25%
- C Increase by 115%
- D Increase by 215%

The impact on financial ratios of changes in margins and volumes

A change in business variables such as margins and volumes of activity can also have an impact on an entity's ability to meet its objectives.

For example, a fall in sales volume can impact profitability ratios and could prevent an entity from achieving an earnings growth objective.

If you are asked in the exam to assess the likelihood of an entity achieving a given objective, you should revise the financial statements to reflect the expected change and then recalculate the necessary ratios.



Test your understanding 8 (Objective test question)

MATT Co is a manufacturing company based in country M, whose functional currency is the M\$.

Extracts from its most recent financial statements are shown below:

Statement of financial position extract

	M\$ m
Long term liabilities (10% bonds)	8.0
	<hr/>
Capital	
Share capital (M\$ 0.50 par)	10.0
Share premium	1.0
Reserves	3.0
	<hr/>
	14.0
	<hr/>

Statement of profit or loss extract

	M\$ m
Revenue	100.0
Gross profit	20.0
Less expenses (excluding finance charges)	(15.0)
	<hr/>
Operating profit	5.0
	<hr/>

Corporation tax is charged at 30%.

MATT Co expects its volume of sales to increase by 5% next year, and its gross profit margin to reduce by 4 percentage points (so for example if the margin were currently 40%, it would reduce to 36% next year).

What is the likely impact on MATT Co's earnings per share (EPS), assuming that its capital structure, tax rate and other expenses stay constant?

- A Increase by 5%
- B Increase by 1%
- C Decrease by 20%
- D Decrease by 76%

13 The use of published accounts for ratio analysis

When external stakeholders, such as potential investors and lenders, try to assess the performance of an entity, the most readily available source of information is the published accounts of the entity.

In trying to interpret the ratios calculated from the published accounts figures, it is important to understand the limitations of the published figures.

Limitations of published accounts figures for ratio analysis

- Published accounts are historic records, not forward looking. However, in many countries there are additional local regulations which require or encourage companies to present additional information as part of their published accounts. This may include the directors' view of the company's prospects, environmental data, market information, gender pay gaps and much more. This fits with the global drive towards integrated reporting, which is discussed more in Chapter 2.
- The statement of profit or loss is prepared using the accruals concept, so it is difficult to relate the figures to the entity's cash position. However the inclusion of the cash flow statement in the published accounts helps to give an impression of the cash position.
- The published accounts have historically contained only financial information. In recent years entities have been encouraged to report on wider issues (such as environmental and social issues), so users of the accounts are able to see a fuller view of the entity's performance.

These points are covered more fully in the next chapter.

14 End of chapter objective test questions



Test your understanding 9 (Objective test question)

The share price of Woundale Co rose from \$2.00 to \$2.30 last year. During the year, the company paid out a dividend of \$0.12 per share.

What was the annual return to investors last year?

- A 15%
- B 21%
- C 30%
- D 42%



Test your understanding 10 (Objective test question)

Q Co is an entity that was set up by the government of Country Q to produce electricity for the country's citizens.

Five years ago it was privatised as the government of Country Q opened up the energy market to competition. The shares of Q co are now owned by both private investors and institutions, and are traded on Country Q's stock market.

What kind of entity is Q Co?

- A Public sector, for-profit entity
- B Public sector, not-for-profit entity
- C Private sector, for-profit entity
- D Private sector, not-for-profit entity



Test your understanding 11 (Objective test question)

Value for money is an important objective for not-for-profit organisations.

Which action is LEAST consistent with increasing value for money?

- A Using a cheaper source of goods without decreasing the quality of not-for-profit organisation services
- B Searching for ways to diversify the finances of the not-for-profit organisation
- C Decreasing waste in the provision of a service by the not-for-profit organisation
- D Focusing on meeting the objectives of the not-for-profit organisation



Test your understanding 12 (Objective test question)

Blunderbuss Co is a listed company with 1 million \$1 shares in issue and long term bank borrowings of \$5 million. The bank interest rate in the most recent year was 8%, but this is expected to change to 10% for the whole of next year.

The company made an operating profit of \$1.84 million last year.

What will be the change in the interest cover of Blunderbuss Co next year, on the assumption that operating profits will stay constant?

- A 25% increase
- B 20% decrease
- C 25% decrease
- D 20% increase

**Test your understanding 13 (Objective test question)**

Angela Co is a listed company.

It has 1 million \$0.25 par value ordinary shares in issue, and \$100,000 worth of \$100 par value bonds.

The shares were originally issued at a premium of \$0.05 per share, and the bonds were issued at a 10% discount to par value. The shares and the bonds are trading at \$1.22 and \$102 respectively.

What is the gearing ratio of Angela Co, calculated as [debt / (debt + equity)] and using market values?

- A 7.7%
- B 8.4%
- C 23.1%
- D 28.6%

**Test your understanding 14 (Objective test question)**

Your manager has asked you to compute the Return on Capital Employed for your company.

Which of the following profit figures would you use in the calculation?

- A Gross profit
- B Net profit
- C Operating profit
- D EBITDA

**Test your understanding 15 (Objective test question)**

Shepley High School had a problem with high levels of pupil absenteeism in the last academic year, so the senior management team decided to implement a new rewards programme in an attempt to reduce the number of pupils missing classes.

The plan was to reward all pupils with a sticker on a chart for every day that they attended all their classes. Then, at the end of each week, all pupils with five stickers on the chart (i.e. those with a perfect attendance record) were entered into a prize draw with a tablet computer as the prize for the winner.

The end of the academic year is now approaching, and the value for money (VFM) of the programme is being assessed.

Key observations:

- The cost of the programme has been lower than budgeted, because the school managed to get an unexpected bulk discount on purchases of the prize tablet computers.
- The level of absenteeism has remained almost constant compared with the previous year.
- A local newspaper has run a negative campaign about the programme, accusing the school of wasting money and 'bribing' pupils to attend classes. The head teacher has defended the programme, but has admitted that other schools in the area manage to achieve lower levels of absenteeism despite not running such expensive rewards programmes.

Which of the following is the best summary of the results of this Value for Money review?

- A Economy, effectiveness and efficiency have all been achieved
- B Economy and efficiency have been achieved, but not effectiveness
- C Economy and effectiveness have been achieved, but not efficiency
- D Only economy has been achieved



Test your understanding 16 (Objective test question)

The most recent statement of financial position of Johnson Co is as follows:

Assets	\$000
Non-current assets	23,600
Current assets	8,400
	<u>32,000</u>
Equity and liabilities	
Capital and reserves	
\$1 Ordinary shares	8,000
Retained earnings	11,200
	<u>19,200</u>
Non-current liabilities	
6% Unsecured bond	8,000
Current liabilities	4,800
	<u>32,000</u>

Johnson Co made an operating profit of \$3.0 million and a net profit of \$2.5 million in the year.

What is the return on equity of Johnson Co?

- A 13.0%
- B 15.6%
- C 31.3%
- D 37.5%



Test your understanding 17 (Objective test question)

The P/E ratios of AA Co and BB Co are 7.8 and 9.8 respectively.

Which TWO of the following statements are definitely correct based on this information?

- A AA Co's share price is lower than BB Co's
- B The market perception of BB Co is better than that of AA Co
- C AA Co is an unquoted company and BB Co is a quoted company
- D The risk associated with BB Co must be higher than the risk associated with AA Co
- E BB Co's earnings yield is lower than AA Co's



Test your understanding 18 (Objective test question)

Josh Co is an all equity financed company. It made sales in the most recent accounting period of \$10.5 million, and achieved an operating profit margin of 12%.

The directors expect sales to increase by 10% next year, and the operating profit margin to fall to 10% in difficult trading conditions.

What is the likely change in operating profit, assuming all else remains the same?

- A No change
- B \$0.105 million decrease
- C \$0.100 million increase
- D \$1.050 million increase


Test your understanding 19 (Objective test question)

Ghoo Co is a company that has 50,000 shares in issue (nominal value \$0.50 per share). The value of its capital employed in the most recent statement of financial position was \$0.35 million.

Statement of profit or loss for the most recent accounting period

	\$000
Revenue	285.1
Cost of sales	(120.9)
	<hr/>
Gross profit	164.2
Operating expenses	(66.9)
	<hr/>
Operating profit	97.3
Finance costs	(10.0)
	<hr/>
Profit before tax	87.3
Taxation	(21.6)
	<hr/>
Profit after tax	65.7

A trainee accountant has computed the return on capital employed (ROCE) and the earnings per share (EPS) of Ghoo Co.

Select the TWO numbers that are incorrect in the workings.

$$\text{ROCE} = \frac{\$87,300}{\$350,000} \times 100$$

$$\text{EPS} = \frac{\$65,700}{\$25,000}$$


Test your understanding 20 (Objective test question)

An investor in Hook Co has calculated that the company's dividend payout ratio is 25% and that the current dividend yield is 4%.

What is the P/E ratio of Hook Co?

- A 100
- B 16
- C 6.25
- D 29



Test your understanding 21 (Objective test question)

Cherry Co has the following accounting ratios, based on its most recent financial statements:

Gross profit margin = 18.6%

Operating profit margin = 10.4%

Asset turnover = 1.5

Interest cover = 4.3

What is the return on capital employed of Cherry Co?

- A It is impossible to tell from such limited information
- B 15.6%
- C 21.8%
- D 27.9%

15 End of chapter case style questions



Test your understanding 22 (Case style question)

- (a) You are a newly appointed Finance Manager of an Educational Institution that is mainly government-funded, having moved from a similar post in a service entity in the private sector. The objective, or mission statement, of this Institution is shown in its publicity material as:

‘To achieve recognized standards of excellence in the provision of teaching and research.’

The only financial performance measure evaluated by the government is that the Institution has to remain within cash limits. The cash allocation each year is determined by a range of non-financial measures such as the number of research publications the Institution’s staff have achieved and official ratings for teaching quality.

However, almost 20% of total cash generated by the Institution is now from the provision of courses and seminars to private sector entities, using either its own or its customers’ facilities. These customers are largely unconcerned about research ratings and teaching quality as they relate more to academic awards such as degrees.

The Head of the Institution aims to increase the percentage of income coming from the private sector to 50% over the next 5 years. She has asked you to advise on how the management team can evaluate progress towards achieving this aim as well as meeting the objective set by the government for the activities it funds.

Required:

Discuss the main issues that an institution such as this has to consider when setting objectives. Advise on whether a financial objective, or objectives, could or should be determined; and whether such objective(s) should be made public.

(30 minutes)

- (b) The following is a list of financial and non-financial performance measures that were in use in your previous profit-making entity:

Financial

Value added

Profitability

Return on investment

Non-financial

Customer satisfaction

Competitive position

Market share

Required:

Choose two of each type of measure, explain their purpose and advise on how they could be used by the Educational Institution over the next 5 years to assess how it is meeting the Head of the Institution's aims.

(30 minutes)

Note: A report format is not required in answering this question.



Test your understanding 23 (Case style question)

The directors of ABC, a conglomerate listed on a stock exchange, are appraising one of their wholly-owned subsidiaries, XYZ, with a view to disinvestment. The subsidiary is primarily involved in the manufacture and distribution of car care products.

Financial data for XYZ are shown in the table below.

Required:

- (a) Calculate three ratios for each of the two years 20X1 and 20X2 which you consider to be appropriate for the evaluation of the subsidiary's gearing and profitability over the two-year period. Your selection of ratios should ensure measurement of the company's performance in both areas.

(30 minutes)

- (b) Prepare a report for the management of ABC. This report should discuss the following:
- (i) the performance of the subsidiary during the past two years, using the ratios calculated in part (a) to guide your comments;
 - (ii) the limitations of the type of historical analysis you have just provided;
 - (iii) suggestions for the parent company's future course of action in respect of the subsidiary, including comment on an appropriate procedure for valuing the company;
 - (iv) other, non-financial information which would be useful to the directors of ABC before they make any decision.

(30 minutes)

Summary accounts for XYZ

Statements of financial position at 31 December

	20X2	20X1
	£000	£000
Non-current assets (plant & equip)	2,650	2,255
Other long-term assets (Note 1)	750	675
Cash and marketable securities	195	162
Receivables	765	476
Inventory and work-in-progress	1,250	893
Other current assets	150	91
	<hr/>	<hr/>
Total assets	5,760	4,552
Shareholders' funds	2,520	1,726
Long-term debt	2,250	1,976
Other long-term liabilities (Note 2)	275	206
Current liabilities	715	644
	<hr/>	<hr/>
Total equity & liabilities	5,760	4,552

Extracts from the statement of profit or loss for the years ended 31 December		
	20X2	20X1
	\$000	\$000
Turnover	6,575	5,918
Cost of goods sold	5,918	5,444
Other expenses	658	592
Other income	23	20
	<hr/>	<hr/>
Earnings before finance charges and tax	22	(98)
Finance Charges	395	339
Tax on ordinary activities (Note 3)	(120)	(149)
	<hr/>	<hr/>
Net loss	(253)	(288)
Notes:		
1	Other long-term assets are motor vehicles and office equipment.	
2	Other long-term liabilities are finance leases.	
3	The tax shown in the 20X1 profit and loss extract will be recovered in 20X2.	
Other financial information		
		\$000
Depreciation 20X2		175
Net realisable value of inventory		1,091
Net realisable value of plant and equipment		3,907
Inventory and work-in-progress at 1 January 20X1		850
Receivables at 1 January 20X1		435

Test your understanding answers



Test your understanding 1 (Integration question)

- (a) Asset turnover = $100\text{m}/20\text{m}$ = 5.0 times
 Operating profit margin = $5\text{m}/100\text{m} \times 100$ = 5%
- | | | |
|--|-----------------------|---------------------|
| | Equity finance | Debt finance |
|--|-----------------------|---------------------|
- (b) Return on capital employed = $5\text{m}/20\text{m} \times 100$ = $5\text{m}/20\text{m} \times 100$
 = 25% = 25%

Working:

	GBPm	GBPm
Operating profit	5.0	5.0
Interest	0.0	(1.0)
	5.0	4.0
Tax (@30%)	(1.5)	(1.2)
	3.5	2.8
Net profit	3.5	2.8
Return on equity = $3.5\text{m}/20\text{m} \times 100$	= 17.5%	= $2.8\text{m}/10\text{m} \times 100$
		= 28%

The financial performance of the two funding options is exactly the same for ROCE. This should not be a surprise given that ROCE is an indication of performance before financing, or underlying performance.

- (c) When considering the ROE we see that the geared option achieves a higher return than the equity option. This is because the debt (10%) is costing less than the return on capital (25%). The excess return on that part funded by debt passes to the shareholder enhancing their return.

The only differences between ROCE and ROE will be due to taxation and gearing.


Test your understanding 2 (Integration question)
(a) Capital gearing ratio

$$\text{Debt} = 5\text{m} + 8\text{m} = \text{USD}13\text{m}$$

$$\text{Equity} = 10\text{m} + 4\text{m} + 1.5\text{m} + 1.5\text{m} = \text{USD}17\text{m}$$

$$\text{Either} = 13\text{m}/17\text{m} \times 100 = 76.5\%$$

$$\text{Or} = 13\text{m}/(13\text{m} + 17\text{m}) \times 100 = 43.3\%$$

$$\text{Interest cover} = 4\text{m}/1\text{m} = 4 \text{ times}$$

- (b) The capital gearing figure looks to be a high percentage, but without further analysis of trends and industry average figures, it is difficult to conclude whether the gearing is too high or whether it is at an acceptable level based on this value alone.

The interest cover measure attempts to equate the earning of profits with ability to pay interest as it falls due. There will be some correlation between the two; however, it is very risky to equate profits earned to cash flow.

However, a value of 4 indicates that the entity was easily able to meet its interest obligations in the most recent accounting period, and that the interest payments are not particularly vulnerable to a drop in profits.


Test your understanding 3 (Integration question)

$$\text{EPS} = \frac{\text{Profit distributable to ordinary shareholders}}{\text{Number of ordinary shares in issue}}$$

$$= 600,000/5\text{m} = \text{USD } 0.12$$

$$\text{DPS (dividend per share)} = \frac{\text{Ordinary dividend}}{\text{Number of shares}}$$

$$= 150,000/5\text{m} = \text{USD } 0.03$$

$$\text{Share price (ex-dividend)} = 0.83 - 0.03 = \text{USD } 0.80$$

(a) Price/earnings ratio = $0.80/0.12 = 6.7$

(b) Dividend payout rate = $0.03/0.12 = 25\%$

(c) Dividend yield = $0.03/0.80 = 3.75\%$

(d) Dividend cover = $0.12/0.03 = 4$


Test your understanding 4 (Objective test question)

The answer is (C).

Earnings growth:

Focus on earnings, so profit after tax. From \$2.3 million to \$2.9 million amounts to approximately 26% growth in total ($= [2.9/2.3] - 1$).

Over three years, the annual growth is found by taking $[3\sqrt{1.26}] - 1 = 8\%$, so above the target of 6% – objective achieved.

Gearing:

Debt value is $\$1 \text{ million} \times (106/100) = \1.06 million

Equity value is $1 \text{ million} \times \$1.88 = \$1.88 \text{ million}$

So $[\text{debt}/(\text{debt} + \text{equity})] = [1.06/(1.06 + 1.88)] = 36\%$, so above the target of 35% – objective not achieved.


Test your understanding 5 (Objective test question)

The answer is (B).

The G\$ is the base currency and the GBP is the variable, so the forward rate is $1.88 \times (1.05/1.08) = 1.83$


Test your understanding 6 (Objective test question)

The answer is (D).

$$23.35 \times \frac{1.02}{1.06} = 22.47$$

so 400,000 USD equates to $(400,000/22.47 =)$ C\$17,802


Test your understanding 7 (Objective test question)

The answer is (C).

Earnings per share is (profit after tax (PAT)/no. of shares)

Current situation

Current profit before tax = T\$ 5.0 m (operating profit) – T\$ 0.8 m (interest)
= T\$ 4.2 m

Therefore PAT = $70\% \times \text{T\$ } 4.2 \text{ m} = \text{T\$ } 2.94 \text{ m}$.

There are 20 million shares in issue, hence EPS = $(\text{T\$ } 2.94 \text{ m}/20 \text{ m})$
= T\$ 0.147.

Next year's forecast

Gross profit will be T\$ 25m and interest will be $(12\% \times \text{T\$ } 8 \text{ m}) = \text{T\$ } 0.96 \text{ m}$.

Profit before tax = T\$ 25 m – T\$ 15 m – T\$ 0.96 m (interest) = T\$ 9.04 m

Therefore PAT = $70\% \times \text{T\$ } 9.04 \text{ m} = \text{T\$ } 6.33 \text{ m}$. Hence EPS = $(\text{T\$ } 6.33 \text{ m}/20 \text{ m}) = \text{T\$ } 0.3165$

This EPS of T\$ 0.3165 is 215% of the previous year's T\$ 0.147, so this is an increase of 115%.



Test your understanding 8 (Objective test question)

The answer is (D).

Earnings per share is (profit after tax (PAT)/no. of shares)

Current situation

Current profit before tax = M\$ 5.0 m (operating profit) – M\$ 0.8 m (interest) = M\$ 4.2 m

Therefore PAT = $70\% \times \text{M\$ } 4.2 \text{ m} = \text{M\$ } 2.94 \text{ m}$.

There are 20 million shares in issue, hence EPS = $(\text{M\$ } 2.94 \text{ m}/20 \text{ m}) = \text{M\$ } 0.147$.

Next year's forecast

Revenue will be $\text{M\$ } 100 \text{ m} \times 1.05 = \text{M\$ } 105 \text{ million}$.

Current gross profit margin is 20% (20/100) so next year's margin will be 16%.

Profit before tax = $(16\% \times \text{M\$ } 105 \text{ m}) - \text{M\$ } 15 \text{ m} - \text{M\$ } 0.8 \text{ m (interest)} = \text{M\$ } 1.0 \text{ m}$

Therefore PAT = $70\% \times \text{M\$ } 1.0 \text{ m} = \text{M\$ } 0.70 \text{ m}$. Hence EPS = $(\text{M\$ } 0.70 \text{ m}/20 \text{ m}) = \text{M\$ } 0.035$

The EPS of M\$ 0.035 is only 24% of the previous year's M\$ 0.147, so this is a decrease of 76%.



Test your understanding 9 (Objective test question)

The answer is (B).

The annual return to investors is:

$$\text{Annual return to investors} = \frac{(P_1 - P_0) + \text{Dividend}}{P_0}$$

where P_0 is \$2.00, P_1 is \$2.30 and Dividend is \$0.12.


Test your understanding 10 (Objective test question)

The answer is (C).

When the entity was privatised, it changed from being a public sector to a private sector entity. The fact that its shares are traded on the stock market and that it operates in a competitive market place suggests that it is a for-profit entity.


Test your understanding 11 (Objective test question)

The answer is (B).

VFM is about achieving economy, effectiveness and efficiency.

(A) achieves economy, (C) achieves efficiency and (D) achieves effectiveness.


Test your understanding 12 (Objective test question)

The answer is (B).

Interest cover is (operating profit/interest payable)

Last year = $\$1.84\text{m}/(\$5\text{m} \times 8\%) = 4.60$

Next year = $\$1.84\text{m}/(\$5\text{m} \times 10\%) = 3.68$

i.e. a decrease of 20%


Test your understanding 13 (Objective test question)

The answer is (A).

Market value of debt is $\$100,000 \times (102/100) = \$102,000$

Market value of equity = 1 million $\times \$1.22 = \$1,220,000$

Therefore, gearing is $[102/(102 + 1,220)] = 7.7\%$


Test your understanding 14 (Objective test question)

The answer is (C).



Test your understanding 15 (Objective test question)

The answer is (D).

Economy – achieved since the cost of the programme was below budget.

Effectiveness – not achieved since there has been no improvement in the level of absenteeism.

Efficiency – not achieved. Other schools manage to get better results at a lower cost, so this programme has not been an efficient use of resources.



Test your understanding 16 (Objective test question)

The answer is (A).

Return on equity uses the net profit figure. (\$2.5 million) and the equity value is equal to the value of the ordinary share capital plus reserves (\$19.2 million).



Test your understanding 17 (Objective test question)

The answer is (B) and (E).

A high P/E ratio shows that investors have confidence in the company.

Earnings yield is the reciprocal of P/E ratio, so a high P/E will correspond to a low earnings yield.



Test your understanding 18 (Objective test question)

The answer is (B).

Last year's operating profit was $\$10.5 \text{ million} \times 12\% = \1.260 million

Next year's is expected to be $(\$10.5 \text{ million} \times 1.10) \times 10\%$
 $= \$1.155 \text{ million}$

i.e. a decrease of \$0.105 million



Test your understanding 19 (Objective test question)

The workings have been corrected below. The bold figures are the ones that were incorrect.

$$\text{ROCE} = \frac{\mathbf{\$97,300}}{\$350,000} \times 100$$

$$\text{EPS} = \frac{\$65,700}{\mathbf{\$50,000}}$$

Explanation:

ROCE uses operating profit, not profit after interest. EPS uses the number of shares, not the value of them.



Test your understanding 20 (Objective test question)

The answer is (C).

Dividend pay-out ratio is (dividend per share/earnings per share), dividend yield is (dividend per share/share price) and P/E ratio is (share price/earnings per share).

Therefore, P/E ratio = (dividend pay-out ratio/dividend yield).

Alternatively, make up some numbers to help you manipulate the formulae.

For example, if dividend pay-out ratio is 25%, assume that dividend per share is \$0.25 and EPS is \$1. Then, if dividend yield is 4%, the share price must be \$6.25 since we have already assumed that dividend per share is \$0.25.

Hence P/E ratio = Share price/EPS = \$6.25/\$1 = 6.25



Test your understanding 21 (Objective test question)

The answer is (B).

ROCE can be found by multiplying asset turnover and operating profit margin.



Test your understanding 22 (Case style question)

- (a) The main issues to consider are:
- Who are the main stakeholders?
 - Where is the financing coming from, and in what proportions?
 - Are there other, higher level objectives that will supersede those set by the Institution, for example political aims/goals by the government?
 - Does the objective need to be measurable?
 - How can one objective meet all the competing aims of the stakeholders?
 - Will information on the Educational Institution's performance be publicly available?

Setting a financial objective has the main advantage of being measurable. If it is made public, it can also be compared with other, similar, institutions if they also set and make public their objective and their subsequent performance. One objective will probably be insufficient, especially as the Institution has two main markets with very different requirements, costs and revenue structures.

The disadvantages of setting and making public an organisation's objectives are:

- The Educational Institution may not be allowed freedom to choose its own policies, for example on charging fees or selection of state-funded students.
- Political decisions may not affect all publicly funded institutions in the same way or to the same extent.
- Cost allocation between state-funded business and private-sector business may be difficult and politically sensitive.

(b) **Examiner's Note**

The question asks for comments on two performance indicators from each list, four criteria in all. In this answer comments are provided for all six criteria. Candidates may only receive marks for a maximum of two indicators from each list (i.e. no compensation between the lists.)

Introduction

Traditionally, financial measures have been the focus of management attention. Increasingly companies are using non-financial indicators to assess success across a range of criteria, which need to be chosen to help a company meet its objectives. However, an indicator, which is appropriate for one group of stakeholders in an organisation, may not be suitable for another group.

Also, indicators that are suitable for short-term performance assessment may be unsuitable, or not optimum, for the long term.

The objective, or mission statement, of this institution is entirely qualitative (and subjective) and makes no concession to financial considerations or constraints.

Financial performance measures

Value added

This is primarily a measure of performance. It is usually defined as sales value less the cost of purchased materials and services. It represents the value added to a company's products by its own efforts. A problem here is comparability with other industries or even other companies in the same industry.

It is less common in the public sector, although the situation is changing and many public sector organisations are now publishing information on their own value added, for example, in the health service.

In respect of teaching, value added could be measured by the percentage of students who leave with a qualification. In post-graduate or executive education, it could be the increase in salary or improved jobs/job prospects obtained by graduates on obtaining their qualification. This may not precisely measure the qualitative aspects of the Institution's objectives, but could provide a close approximation.

In respect of research, the measure is much easier to apply and interpret. Research output can be measured by the number of staff publications in various categories of journal.

Profitability

Profitability may be defined as the rate at which profits are generated. It is often expressed as profit per unit of input (e.g. investment). However, profitability limits an organisation's focus to one output measure – profit. It overlooks quality and this limitation needs to be kept in mind when using it as a measure of success. Profitability as a measure of decision-making has been criticised because

- it fails to provide a systematic explanation as to why one business sector has more favourable prospects than another;
- it does not provide enough insight into the dynamics and balance of an enterprise's individual business units and the balance between them;
- it is remote from the actions that actually create value and cannot therefore be managed directly in all but the smallest of organisations;
- the input to the measure may vary substantially between organisations.

However, it is a well-known and accepted measure that, once the input has been defined, is readily understood. Provided the input is consistent across organisations and time periods it also provides a useful comparative measure. Although the concept of profit in its true sense is absent from most of the public sector, profitability may be used to relate inputs to outputs if a different measure of output is used, for example surplus after all costs to capital investment.

In the case of the educational institution, a problem may be determining the value of the initial investment, which may have been purchased by the government many years ago and appear to have cost nothing. A notional value could be attached to these assets for the purpose. Profits would be fees and other income less costs of salaries and other expenses. Notional rents or depreciation would also have to be estimated.

This measure would have little relevance to the Institution's only stated objective and its calculation is fraught with uncertainties and unknowns. This would be a measure that the organisation might wish to introduce some time in the future, but first it needs to estimate the value of its assets and the true nature of its costs.

Return on investment (ROI)

This is an accounting measure, which is calculated by dividing annual profits by the average net book value of assets. It is, therefore, subject to the distortions inevitable when profit rather than cash flows are used to determine performance. Distorting factors for interpretation and comparison purposes include depreciation policy, stock revaluations, write off of intangibles such as goodwill. A further defect is that ROI ignores the time value of money, although this may be of less concern when inflation rates, and therefore money discount rates, are very low.

Return on assets may not adequately reflect how efficiently assets were utilised; in a commercial context taking account of profits, but not the assets used in their making, for whatever reason, would overstate a company's performance. In the public sector, the concept of profit is absent, but it is still not unrealistic to expect organisations to use donated assets with maximum efficiency. If depreciation on such assets were to be charged against income, this would depress the amount of surplus income over expenditure. Other points which may affect interpretation of ROI in any public sector organisation, including educational institutions are: difficulty in determining value; assets may have no re-sale value; they are, or were originally intended, for use by the community at large and any charge for depreciation may have the effect of 'double taxation' on the taxpayer.

As with profitability, the relevance of this measure at the present time and to the stated objective is limited. First of all, it needs to estimate the value of its assets and the true nature of its costs.

Non-financial performance measures

Customer satisfaction

This measure can be linked to market share. If customers are not satisfied, they will take their business elsewhere and the company will lose market share or go into liquidation. Measuring customer satisfaction is difficult to do formally, as the inputs and outputs are not readily defined or measurable. Surveys and questionnaires may be used, but these methods have known flaws, mainly as a result of respondent bias. It can, of course, be measured indirectly by the level of sales and increase in market share.

In the United Kingdom, the Citizens' Charter was designed to help 'customers' of public services gain satisfaction and redress if they do not, for example refunds on late trains. There are many criteria for determining customer satisfaction in an educational institution, if we assume the 'customer' is the student. For example:

- Evaluations by students at the end of modules or entire programmes. There are problems of bias with this type of measure, but this is true of all surveys.
- Quality audits by government agencies and other regulatory bodies.
- Internal peer reviews.

However, the customer could also be the employer or sponsor of the graduating student. Surveys of satisfaction from this type of customer are less likely to be biased.

This type of measure will already be in place and possibly to a greater extent than in many private-sector institutions. If the Institution wishes to increase its proportion of private funding, then it needs to focus on developing its surveys of employers and likely providers of research funding.

Competitive position

The performance of a business needs to be compared with that of its competitors to establish a strategic perspective. A number of models and frameworks have been suggested by organisational theorists as to how a competitive position may be determined and improved. A manager needing to make decisions must know by whom, by how much and why he is gaining ground or being beaten by competitors.

Conventional measures such as accounting data are useful, but no one measure is sufficient. Instead, an array of measures is needed to establish competitive position. The most difficult problem to overcome in using competitive position as a success factor is in collecting and acquiring data from competitors.

The public sector is increasingly in competition with other providers of a similar service, both in the private and public sector. For example, universities must now compete for government funding on the basis of research output as well as meeting a range of targets for student recruitment. Their advantage is that it is easier to gain access to data from such competitors than is possible in the private sector, as all this information is ultimately in the public domain. Less publicly available is data on the amount of privately-funded teaching obtained by public-sector educational institutions.

This measure will also be already extensively used by the Institution, certainly in respect of its competitive position for students worldwide. Where it might need to develop its measures and improve its measurement data is in respect of privately-funded or sponsored students or courses.

Market share

Market share, a performance indicator that could conceivably be included under the financial heading as well as non-financial, is often seen as an objective for a company in its own right. However, it must be judged in the context of other measures such as profitability and shareholder value. Market share, unlike many other measures, can take quality into account as, it must be assumed, if customers do not get the quality they want or expect the company will lose market share.

Gaining market share must be seen as a long-term goal of companies to ensure outlets for their products and services and to minimise competition. However, market share can only be acquired within limits if a monopoly situation is to be avoided.

It is a measure that is becoming increasingly relevant to the public sector, for example universities and the health service. In educational institutions, the market share within the home country can be measured quite easily by reference to student numbers, in total and by programme/course. It is more difficult to compare market share worldwide. However, this measure of market share is on volume not value. Some institutions have high value programmes, such as MBAs, that distort this simple volume measure.

This institution needs to determine its mix of programmes and courses and set targets aimed at specific markets, for example to achieve x per cent of the market share of home-based MBA students by 2xxx. Such a target by itself will not be a guide to the quality of teaching and would need to be combined with other measures, such as customer satisfaction.



Test your understanding 23 (Case style question)

Key answer tips

Part (a): There are many other alternative ratios which could have been calculated (other than those below), as long as between them the five ratios cover the efficiency, profitability and liquidity of the company. It would also be possible to calculate different figures for each ratio, depending on whether the 'other financial information' was used, whether year-end or average statement of financial position figures were used, etc. What is important is that you show clearly how you have derived each of your chosen ratios, and that you do not overrun the time allowed for this part of the question.

- (a) The following ratios can be calculated from the figures in the summary accounts:

Profitability ratios

Return on Capital Employed =	Opening profit	20X2 22	20X1 (98)
	Capital employed	$\frac{2,520 + 2,250}{= 0.0046}$	$\frac{1,726 + 1,976}{= (0.0265)}$
Operating profit margin	Operating profit	22	(98)
	Sales	$\frac{22}{6,575} = 0.33\%$	$\frac{(98)}{5,918} = (1.66\%)$

Gearing ratios

$$\text{At 31 Dec 20X2, gearing} = \frac{2,250}{2,250 + 2,520} = 47\%$$

$$\text{At 31 Dec 20X1, gearing} = \frac{1,976}{1,726 + 1,976} = 53\%$$

- (b)

Report

To: The Management of ABC

From: The Management Accountant

Date: X-X-20XX

Subject: Proposed disinvestment of XYZ

Introduction

This report has been prepared to appraise the financial performance of our wholly-owned subsidiary XYZ, with a view to recommending whether the company should be divested. The analysis has used XYZ's summary accounts for 20X1 and 20X2.

Analysis of recent performance

Gearing has fallen over the period as a result of the new equity injection exceeding the increase in net borrowings.

$$\text{At 31 Dec 20X2, gearing} = \frac{2,250}{2,250 + 2,520} = 47\%$$

$$\text{At 31 Dec 20X1, gearing} = \frac{1,976}{1,726 + 1,976} = 53\%$$

The company was struggling to pay its finance charge in 20X1 out of available profits; although the profitability situation has improved slightly in 20X2, finance charges payable still exceeds available profits so that a net loss is reported.

Limitations of historical analysis

The analysis above has been carried out on the summary accounts of XYZ for 20X1 and 20X2 which were presumably drawn up under the historical cost convention. In a period of changing prices such accounts can become misleading, for instance with the depreciation charge being calculated on the out-of-date historical cost of the fixed assets. Capital gearing ratios such as calculated above do not give the true picture; it would be more helpful if the summary accounts could be restated under a current cost basis.

There is the further conflict that a decision is to be made about the future based on an analysis of the past. The summary accounts give a historical record of what has happened over the last two years, but give no evidence of the company's likely future prospects. The decision as to whether XYZ should be divested should be taken on the basis of future opportunities and threats to which the company will be exposed.

A final weakness of analysis from accounts is that conventional accounting statements do not recognise a number of important assets that a company might have – a trained workforce, a new product about to be launched on to the market which has been fully researched, other sorts of inherent goodwill. It is impossible to look at the full picture of a company's situation while these assets have been ignored.

Future course of action

Given that ABC has subscribed an extra \$1m of share capital of XYZ within the past 12 months, it seems premature to be considering divesting the company. It is perhaps more reasonable to allow the newly invested funds to settle down and reap the benefits for which, presumably, the investment was made. However, if ABC insists on divestment, there is a choice between closing the business (and selling the assets piecemeal) or selling the business as a going concern. If the assets are to be sold piecemeal, their relevant values are their net realisable values, e.g. inventory \$1.091m and plant and equipment \$3.907m. An aggregate total of the net assets valued at net realisable value would be the minimum acceptable offer.

In the more likely situation of selling the business as a going concern, the value of the business forgone if sold would be the aggregate of the forecast cash flows arising to ABC from XYZ, discounted at ABC's cost of capital. Such a computation requires many estimates to be made, including future growth of XYZ's business and of the car care products business sector as a whole. It may only be possible to identify a range of possible values, but even if it contains a degree of estimation the exercise will still be valuable.

Other valuable non-financial information

Several valuable items of non-financial information have already been identified above which would be useful to the directors of ABC before they make any decision:

- (i) the financial results of XYZ on a current cost basis, i.e. after the effects of price changes have been eliminated;
- (ii) whether the company has significant intangible assets not currently recognised in the accounts;
- (iii) the future prospects for the company and its place in its business sector if it is retained within the ABC group;
- (iv) whether a prospective purchaser of the company has already been identified;
- (v) the effect on the morale of the remaining workforce if the company is closed or sold.

Please let me know if I can be of any further assistance.

Signed: The management accountant