

2017–18 Study text

R02

Investment principles and risk



R02 Study text: 2017–18

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Under 'Unit updates', examination changes and the testing position are shown under 'Qualifications update'; study text updates are shown under 'Learning solutions update'.

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The CII also thanks the National Savings and Investments (NS&I) for its kind permission to include the NS&I 'Quick guide for financial advisers' (available on www.nsandi-adviser.com/) in chapter 1, figure 1.3.

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Unless otherwise stated, the authors have drawn material attributed to other sources from lectures, conferences, or private communications.

Typesetting, page make-up and editorial services CII Learning Solutions.

Using this study text

Welcome to the **R02: Investment principles and risk** study text which is designed to cover the R02 syllabus, a copy of which is included in the next section.

Please note that in order to create a logical and effective study path, the contents of this study text do not necessarily mirror the order of the syllabus, which forms the basis of the assessment. To assist you in your learning we have followed the syllabus with a table that indicates where each syllabus learning outcome is covered in the study text. These are also listed on the first page of each chapter.

Each chapter also has stated learning objectives to help you further assess your progress in understanding the topics covered.

Contained within the study text are a number of features which we hope will enhance your study:



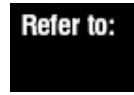
Activities: reinforces learning through practical exercises.



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Refer to: located in the margin, extracts from other CII study texts, which provide valuable information on or background to the topic. The sections referred to are available for you to view and download on RevisionMate.



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Revision questions: to test your recall of topics.



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Sources/quotations: cast further light on the subject from industry sources.



Key points: act as a memory jogger at the end of each chapter.



Think back to: located in the margin, highlights areas of assumed knowledge that you might find helpful to revisit. The sections referred to are available for you to view and download on RevisionMate.



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Useful websites: introduce you to other information sources that help to supplement the text.

At the end of every chapter there is also a set of self-test questions that you should use to check your knowledge and understanding of what you have just studied. Compare your answers with those given at the back of the book.

By referring back to the learning outcomes after you have completed your study of each chapter and attempting the end of chapter self-test questions, you will be able to assess your progress and identify any areas that you may need to revisit.

Not all features appear in every study text.

Note

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Investment principles and risk

Purpose

At the end of this unit, candidates will have investigated the:

- Characteristics, inherent risks, behaviour and correlation of asset classes, and investment products;
- Macro-economic environment and its impact on asset classes;
- Merits and limitations of the main investment theories;
- Nature and impact of the main types of risk on investment performance;
- Performance of investments.

Summary of learning outcomes	Number of questions in the examination*
1. Analyse the characteristics, inherent risks, behaviour and correlation of asset classes.	17 standard format/11 multiple response
2. Understand the macro-economic environment and its impact on asset classes.	6 standard format
3. Understand the merits and limitations of the main investment theories.	7 standard format
4. Apply the principles of the time value of money.	3 standard format
5. Analyse and explain the nature and impact of the main types of risk on investment performance.	5 standard format
6. Analyse the characteristics, inherent risks, behaviours and relevant tax considerations of investment products.	15 standard format/7 multiple response
7. Apply the investment advice process.	11 standard format
8. Understand the principles of investment planning.	8 standard format
9. Analyse the performance of investments.	10 multiple response

*The test specification has an in-built element of flexibility. It is designed to be used as a guide for study and is not a statement of actual number of questions that will appear in every exam. However, the number of questions testing each learning outcome will generally be within the range plus or minus 2 of the number indicated.

Important notes

- **Method of assessment: 100 questions: 72 standard format and 28 multiple response questions. 2 hours are allowed for this examination.**
- **This syllabus will be examined from 1 September 2017 to 31 August 2018.**
- **Candidates will be examined on the basis of English law and practice in the tax year 2017/2018 unless otherwise stated.**
- **It should be assumed that all individuals are domiciled and resident in the UK unless otherwise stated.**
- **Candidates should refer to the CII website for the latest information on changes to law and practice and when they will be examined:**
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1. Analyse the characteristics, inherent risks, behaviour and correlation of asset classes.

- 1.1 Analyse the characteristics and inherent risks of the main asset classes.
- 1.2 Analyse the behaviour and correlation of asset classes and their relevance to asset allocation.

2. Understand the macro-economic environment and its impact on asset classes.

- 2.1 Explain the key economic trends and their impact on asset classes.
- 2.2 Explain the key economic indicators, their trends and interpretation.
- 2.3 Explain the impact of monetary and fiscal policy.

3. Understand the merits and limitations of the main investment theories.

- 3.1 Explain the main investment theories, their benefits and limitations.
- 3.2 Explain portfolio theory, diversification and hedging.
- 3.3 Explain behavioural finance and its impact on investment markets and individuals.

4. Apply the principles of the time value of money.

- 4.1 Apply the principles of the time value of money.
- 4.2 Calculate compound interest, discounts, real returns and nominal returns.

5. Analyse and explain the nature and impact of the main types of risk on investment performance.

- 5.1 Explain the nature and impact of the main types of risk on investment performance.
- 5.2 Analyse the nature and impact of the main types of risk on investment performance.

6. Analyse the characteristics, inherent risks, behaviours and relevant tax considerations of investment products.

- 6.1 Explain the advantages and disadvantages of direct investment in securities and assets compared to indirect investment through collectives and other products.
- 6.2 Analyse the characteristics, inherent risks, behaviours and relevant tax considerations of the main types of indirect investment products.

7. Apply the investment advice process.

- 7.1 Explain the Know Your Client requirements applied to the investment advice process.
- 7.2 Apply asset allocations to different client risk profiles and requirements.

8. Understand the principles of investment planning.

- 8.1 Explain the main approaches to asset allocation.
- 8.2 Explain the portfolio construction process.
- 8.3 Explain the basic principles of platforms.

9. Analyse the performance of investments.

- 9.1 Analyse portfolio performance using different benchmarks and other methods.
- 9.2 Apply an appropriate investment portfolio review process.



Syllabus construction

The syllabus consists of learning outcomes and assessment criteria only. A comprehensive listing of the indicative content is located at www.fca.org.uk/your-fca/documents/investment-principles-and-risk.

Reading list

The following list provides details of various publications which may assist you with your studies.

Note: The examination will test the syllabus alone.

The reading list is provided for guidance only and is not in itself the subject of the examination.

The publications will help you keep up-to-date with developments and will provide a wider coverage of syllabus topics.

CII/PFS members can borrow most of the additional study materials below from Knowledge Services. CII study texts can be consulted from within the library.

New materials are added frequently - for information about new releases and lending service, please go to www.cii.co.uk/knowledge or email knowledge@cii.co.uk.

CII study text

Investment principles and risk. London: CII. Study text Ro2.

Books (and ebooks)

Financial calculations. Sarah Dingley-Brown. Annual. Totnes, SDB Training.

Mastering financial calculations: a step-by-step guide to the mathematics of financial markets instruments. 3rd ed. Bob Steiner. Harlow: FT Prentice Hall, 2012.*

Investments. 10th global edition. Zvi Bodie, Alex Kane, Alan J. Marcus. Berkshire: McGraw-Hill, 2014.

Investments. 10th global edition. Zvi Bodie, Alex Kane, Alan J. Marcus. Berkshire: McGraw-Hill, 2014.

Investments: principles and concepts. Charles P Jones. Wiley, 2014.

Modern portfolio theory and investment analysis: international student version. 8th ed. Edwin J Elton et al. New York: John Wiley, 2011.

The basics of finance: an introduction to financial markets, business finance, and portfolio management. Frank Fabozzi. London, Wiley, 2010.*

The Financial Times guide to investing. 3rd edition. Glen Arnold. FT Prentice Hall, 2014.

The Financial Times guide to making the right investment decisions: how to analyse companies and value shares. 2nd ed. Michael Cahill. Prentice Hall/Financial Times, 2010.

Winning client trust. Chris Davies. London: Ecademy Press, 2011.

Ebooks

The following ebooks are available through Discovery via www.cii.co.uk/discovery (CII/PFS members only):

Investment risk and uncertainty: advanced risk awareness techniques for the intelligent investor. Steven P. Greiner. Hoboken: Wiley, 2013.

Investment risk management. Greg Filbeck, H. Kent Baker. New York: Oxford University Press, 2015.

Investor behaviour: the psychology of financial planning and investing. H. Kent Baker. Hoboken, New Jersey: Wiley, 2014.

Finance: a quantitative introduction. Piotr and Lucia Staszkiwicz. Amsterdam: Academic Press, 2015.

Portfolio management: a strategic approach. John Wyzalek, Ginger Levin. Boca Raton: Auerback Publications, 2015.

Factfiles and other resources

CII factfiles are concise, easy to digest but technically dense resources designed to enrich the knowledge of members. Covering general insurance, life and pensions and financial services sectors, the factfile collection includes key industry topics as well as less familiar or specialist areas with information drawn together in a way not readily available elsewhere. Available online via www.cii.co.uk/ciifactfiles (CII/PFS members only).

- The regulation of retail investment business. Kevin Morris.
- The regulation of investment intermediaries. Kevin Morris.

Additional articles and technical bulletins are available under the Personal Finance section of the website at www.cii.co.uk/knowledge/personal-finance.

Journals and magazines

Personal finance professional (previously Financial solutions). London: CII. Six issues a year. Also available at www.thepfs.org/knowledge (CII/PFS members only).

Investment adviser. London: Financial Times Business. Weekly. Also available via www.ftadviser.com.

Investment week. London: Incisive Financial Publishing. Weekly. Available online via www.investmentweek.co.uk.

Reference materials

Core tax annuals, 6v (Capital gains tax; Corporation Tax; Income tax; Inheritance tax; Trusts and estates; Value-added tax). Various authors. Haywards Heath, West Sussex: Bloomsbury Professional. Annual.

Dictionary of banking and finance. P H Collin. A&C Black, 2005.*

Financial Conduct Authority (FCA) Handbook. Available at www.handbook.fca.org.uk/handbook.

Harriman's financial dictionary: over 2,600 essential financial terms. Edited by Simon Briscoe and Jane Fuller. Petersfield: Harriman House, 2007.*

Lamont's glossary: the definitive plain English money and investment dictionary. Barclay W Lamont. 10th ed. London: Taxbriefs, 2009. Also available online via www.cii.co.uk/lamont (CII/PFS members only).

Prudential Regulation Authority (PRA) Rulebook Online. Available at www.prarulebook.co.uk

*Also available as an ebook through Discovery via www.cii.co.uk/discovery (CII/PFS members only).



Examination guides

An examination guide, which includes a specimen paper, is available to purchase via www.cii.co.uk.

If you have a current study text enrolment, the current examination guide is included and is accessible via Revisionmate (www.revisionmate.com). Details of how to access Revisionmate are on the first page of your study text.

It is recommended that you only study from the most recent versions of the examination guides.

Exam technique/study skills

There are many modestly priced guides available in bookshops. You should choose one which suits your requirements.

The Insurance Institute of London holds a lecture on revision techniques for CII exams approximately three times a year. The slides from their most recent lectures can be found at www.cii.co.uk/iilrevision (CII/PFS members only).



R02 syllabus quick-reference guide

Syllabus learning outcome	Study text chapter and section
1. Analyse the characteristics, inherent risks, behaviour and correlation of asset classes.	
1.1 Analyse the characteristics and inherent risks of the main asset classes.	1.2C–1.2E
1.2 Analyse the behaviour and correlation of asset classes and their relevance to asset allocation.	1.2C–1.2E
2. Understand the macro-economic environment and its impact on asset classes.	
2.1 Explain the key economic trends and their impact on asset classes.	2A, 2B
2.2 Explain the key economic indicators, their trends and interpretation.	2C
2.3 Explain the impact of monetary and fiscal policy.	2D–2G
3. Understand the merits and limitations of the main investment theories.	
3.1 Explain the main investment theories, their benefits and limitations.	3A–3D
3.2 Explain portfolio theory, diversification and hedging.	3A, 9B
3.3 Explain behavioural finance and its impact on investment markets and individuals.	3E
4. Apply the principles of the time value of money.	
4.1 Apply the principles of the time value of money.	4A
4.2 Calculate compound interest, discounts, real returns and nominal returns.	4A

5.	Analyse and explain the nature and impact of the main types of risk on investment performance.	
5.1	Explain the nature and impact of the main types of risk on investment performance.	5A
5.2	Analyse the nature and impact of the main types of risk on investment performance.	5A–5C
6.	Analyse the characteristics, inherent risks, behaviours and relevant tax considerations of investment products.	
6.1	Explain the advantages and disadvantages of direct investment in securities and assets compared to indirect investment through collectives and other products.	6.2T
6.2	Analyse the characteristics, inherent risks, behaviours and relevant tax considerations of the main types of indirect investment products.	6.1A–6.1G, 6.2H–6.2S
7.	Apply the investment advice process.	
7.1	Explain the Know Your Client requirements applied to the investment advice process.	7A, 7B
7.2	Apply asset allocations to different client risk profiles and requirements.	7C
8.	Understand the principles of investment planning.	
8.1	Explain the main approaches to asset allocation.	8A–8D
8.2	Explain the portfolio construction process.	8E, 8F
8.3	Explain the basic principles of platforms.	8G–8K
9.	Analyse the performance of investments.	
9.1	Analyse portfolio performance using different benchmarks and other methods.	9A–9C
9.2	Apply an appropriate investment portfolio review process.	8L

Learning objectives

After studying this introduction, you should be able to:

- state the main investment choices available to investors;
- outline the varying risk/reward characteristics of different types of assets.

Providing investment advice

This introduction is provided by way of background to your studies.

An adviser needs to have a thorough knowledge of the various investment products that are available in the market place when providing advice. The circumstances of every individual are unique, and it is essential that an adviser considers which investment products are appropriate to meet the varying needs of a client before making any recommendations.

An adviser must be able to explain fully to the client, in a way that they will understand, how each product that is recommended meets the identified financial goals and objectives of the client. Any options need to be fully described, and the relative advantages and disadvantages of any alternatives pointed out.

Main investment choices

Types of investment

An adviser has a wide range of investment products from which to choose when making a recommendation to a client. Each category of asset has a potential role to play within a client's overall investment portfolio; however, each has a different risk/return profile.

Cash deposits	<ul style="list-style-type: none">• Practically no risk to the capital value (unless the bank or building society collapses).• Inflation can erode the real value of the capital over time and reduce its buying power.
Fixed interest securities	<ul style="list-style-type: none">• Characterised by security of income (unless the issuer defaults), particularly in nominal terms.• Varying degrees of exposure to capital gain or capital loss.
Equities	<ul style="list-style-type: none">• Characterised by insecurity of income and capital values over the shorter term, but offering the potential of rising income and real capital growth over the longer term.• Equities tend to perform badly in times of slowing economic growth or rising interest rates.

Property

- Both residential and commercial property have proved to be a reasonable long-term hedge against inflation.
- Property can also reduce volatility in a portfolio as the property cycle does not always follow the equity cycle, although both equities and property suffered from a market collapse in 2007.

These investment categories should not be viewed as being totally separate from each other. Overall they present a broad spectrum of investments, rather than totally separate categories.

Investments can be held in two main ways:

- **Collective or pooled investments.** Such as unit trusts, open-ended investment companies (OEICs) and investment trusts. These allow relatively small amounts to be invested in worldwide stock markets, with stock selection being made by full-time professional investment managers.
- **Direct investments.** Such as individual shares. The growth of internet trading has opened up dealing in shares to the mass market, with many of the high street banks offering share dealing facilities. To help manage risk it is recommended that a diversified range of shares should be held in a portfolio.

Investment choices

There are three main investment possibilities:

- making deposits;
- buying fixed interest securities; and
- buying equities.

Each must bear a relatively stable rate of return relationship to the other for the economy to function.

Table 2: Investment choices

Cash deposits	<ul style="list-style-type: none">• Deposits generally yield less than fixed interest securities for the same degree of risk, and rarely achieve much real growth over time once tax is taken into account.
Fixed interest securities	<ul style="list-style-type: none">• Fixed interest securities generally yield lower overall returns than equity investments, but have higher returns than deposits; however, they will rarely beat inflation by a significant amount.
Equities	<ul style="list-style-type: none">• Equity investments will generally achieve returns that are higher than both fixed interest securities and cash deposits over the longer term. The dividend yield on equities is, however, usually low compared to the yield on fixed interest securities, but both dividends and share prices have the potential to grow over time to compensate.

There is, therefore, a fixed hierarchy of returns that is unlikely to be breached for any substantial period.

In assessing the choices that are available, the following points should also be considered:

- Investors' money tends to move to those areas where it will achieve the best results, in relation to both the risk that is involved and how long investors are prepared to tie up their funds.

- The rational investor generally assumes that a higher return can be expected if:
 - funds are committed to a particular investment for a longer period;
 - the risk of capital loss is higher; or
 - larger funds are committed.
- There are separate financial markets in each of the main types of investments (cash deposits, fixed interest securities and equities). However, a change in one market, such as an interest rate change, is almost certain to have repercussions in the others, i.e. a reduction in interest rates could encourage a rise in both fixed interest and equity values, but lower returns from deposits.

Different roles

Each investment has a role to play:

Figure 1: Role of different asset classes

Equities are good for long-term real growth of capital and/or income, although the risk of loss is higher than for either fixed interest securities or cash deposits.

Deposits are good for the protection of capital, at least in nominal terms and over shorter periods, and are a safe haven when times are bad economically (when the value of other investments may fall).

Fixed interest securities are good for secure levels of nominal income, with some scope for capital gains if interest rates fall. They are usually less volatile than equities.

These and other issues are dealt with in this text.

1 The characteristics, inherent risks, behaviour and correlation of asset classes

Contents

1.1: Cash investments and fixed-interest securities

1.2: Equities, property and alternative investments

1.1: Cash investments and fixed-interest securities

Contents	Syllabus learning outcomes
Learning objectives	
Introduction	
Key terms	
A Cash investments	1.1, 1.2
B Fixed-interest securities	1.1, 1.2
Key points	
Question answers	
Self-test questions	

Learning objectives

After studying this chapter, you should be able to:

- analyse the characteristics and inherent risks of the main types of cash investments; and
- analyse the characteristics and inherent risks of the main types of fixed-interest securities, and the characteristics of yields, yield curves and the bond markets.

Introduction

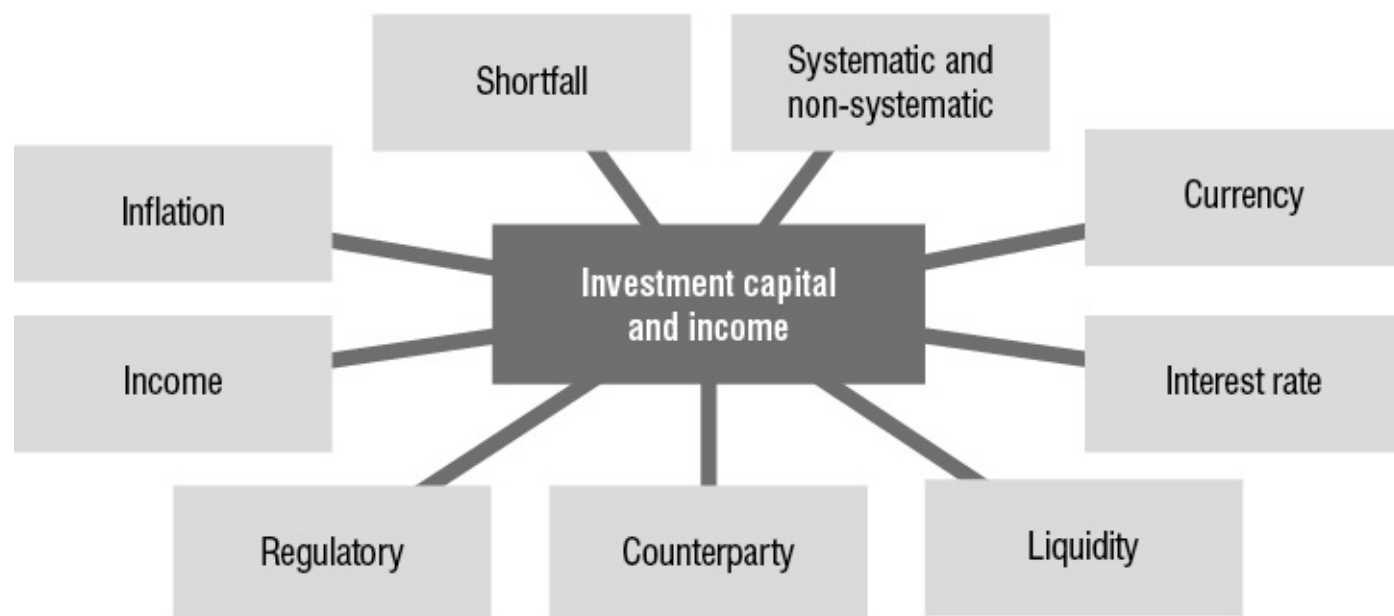
An adviser has a wide range of investment products from which to choose when making a recommendation to a client. Each category of asset has a potential role to play within a client's overall investment portfolio; however, each has a different risk/return profile.

Different types of investment are more or less risky in different circumstances:

- Inflation erodes monetary values, so cash and fixed-interest securities are vulnerable to inflation.

- In an economic downturn, equities are generally losers.
- In periods of declining interest rates, cash deposits are generally unattractive, while fixed-interest bonds and very often equities can be more appealing.
- Risk may affect both the capital value and income of investments.

Figure 1.1: Different types of risk



Risk is everywhere and in every investment, and yet there is no clear way to measure or compare the risk of different types of investments. This chapter examines the characteristics and risks of the main forms of direct investment, i.e. cash, fixed-interest securities, equities, property and alternative investments such as works of art and commodities.



Key terms

This chapter features explanations of the following ideas:

Bond markets	Bond titles	Bond volatility	Bond yields
Capital gains tax (CGT)	Cash investments	Cash ISAs	Certificates of deposit
Clean prices	Commercial bills	Convertible loan stock	Corporate bonds
Credit ratings	Cum dividend	Debentures	Debt Management Office (DMO)
Default risk	Ex-dividend	Factors affecting bond prices	Financial Services Compensation Scheme (FSCS)

Fixed charge	Fixed-interest securities	Floating charge	Floating rate notes (FRNs)
Foreign currency deposits	Gilts	Index-linked gilts	Inflation risk
Instant access accounts	Interest rate risk	London Interbank Offered Rate (LIBOR)	Market or systematic risk
Mid-market prices	Money market funds	National Savings and Investments (NS&I) products	Nominal or par value
Notice accounts	Offshore accounts	Permanent Interest Bearing Shares (PIBS)	Perpetual Subordinated Bonds (PSBs)
Reinvestment risk	Restricted access accounts	'Repo' market	Strips market
Secured and unsecured loans	Term accounts	Treasury bills	Yield curves

A Cash investments

Cash investments provide a high level of security for an investor's money. However, they generally provide little protection against inflation, which over time can erode the capital value and reduce its buying power.



Cash deposits

Although currently offering low returns, it is important for all investors to have some money in a suitable cash deposit so that it can be easily accessed in the event of an emergency.

A1 General characteristics

The major deposit takers are banks, building societies and the UK Government through National Savings and Investments (NS&I).

Table 1.1: Characteristics of cash investments	
The main characteristics of cash deposits are:	<ul style="list-style-type: none"> Investors receive regular interest on their deposit at the prevailing rate. On some deposits the interest rate is variable, so that the income will rise and fall with interest rates generally. To obtain a fixed return usually involves the investor locking up their money for a fixed term.
	<ul style="list-style-type: none"> The investor's capital is not exposed to investment risk. It is repaid in full either on

demand or at the end of a stated term. There is, however, no potential for capital growth, which means that its real value will be eroded by inflation.

- **The return simply comprises interest** with no potential for capital growth.

- Cash is a **liquid asset** that can be accessed easily if necessary.

The interest rate applied to the deposit is usually:

- A flat rate. (An annual equivalent rate (AER) is where interest is compounded more frequently than once a year.)
- Fixed or variable.
- Paid gross of income tax.
- Dependent upon the term and/or notice required.
- Subject to penalties on early withdrawal in the case of fixed-term deposits.

Fixed-term deposits can also be made in money market accounts. The term can range from overnight to one year and the rates are based on those that can be obtained in the money markets as measured by the London Interbank Offered Rate (LIBOR).

Many accounts offer higher rates of interest, but require notice periods or minimum balances before penalty-free withdrawals can be made. The types of penalty that can be imposed are:

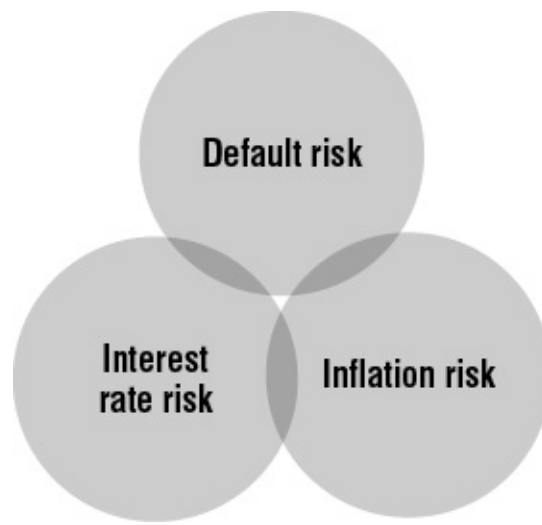
- loss of the interest differentials that were being provided for larger or longer-term deposits; and
- loss of interest for the period of notice required on the account.

If a penalty charge is applied on withdrawal it can greatly reduce the overall return that an investor earns. This should be taken into account when considering the most appropriate account to suit their needs and objectives.

A2 Risks

Although cash deposits are relatively simple products, with low risk and no explicit management charges, it does not follow that they are free of risks.

Figure 1.2: Risks facing cash investments



The risks presented by cash deposits include the following:

- Deposit-taking institutions are of **varying creditworthiness**. The possibility of an institution becoming insolvent and **defaulting** must be assessed.
- **Inflation reduces returns** and could mean the real return after income tax is negative.
- **Interest rates may fluctuate**, and the return earned could vary over time.
- Deposits in foreign currencies are subject to **exchange rate movements**. As a result, cash investors can often find their deposit accounts earning a lower rate than expected, or even suffer a capital loss.

When comparing available investment options it is important to understand the risks that exist and to consider how they could impact on an investment.

A2A Default risk

Events in 2008 showed that the risk of a bank or building society defaulting on its obligation to repay an investor's capital is a very real one. The risk associated with a particular institution therefore needs to be assessed carefully. To judge the level of risk you should consider two things:

- creditworthiness of the bank or building society; and
- extent to which any compensation scheme will protect the deposits made.

Creditworthiness


One of the ways in which the creditworthiness of a bank or building society can be assessed is by looking at its credit rating. These are issued by credit rating agencies such as Standard & Poor's, Fitch Ratings and Moody's, principally to assess the default risk associated with bonds issued by governments and companies, but they also give an indication of a bank's stability and its ability to repay debts.

Compensation scheme

In the UK, the Financial Services Compensation Scheme (FSCS) is the statutory fund of last resort that can be called upon in the event of the failure of a bank or other financial firm. Under the FSCS, the protection provided for deposits is 100% of the first £85,000 per authorised institution.

Key points about the FSCS

- The limits of compensation apply for each investor.

- 
- An investor with several accounts with the same bank or building society cannot recover more than those investors who hold all of their money in one account.
 - Joint account holders can each recover up to the maximum limit of compensation in respect of the same account.
 - If deposit accounts are held at banks and building societies that are subsidiaries of a larger group and it is only the parent company that is authorised, only the first £85,000 is protected.

There are special rules where deposits are held with a UK branch of a bank from the European Economic Area (EEA). However, the FSCS scheme does not cover deposits with institutions outside the EEA or in the Channel Islands or the Isle of Man.

It is important to bear in mind that in the event of a deposit-taking institution defaulting it will take time to resolve the position and return deposits to investors. The time the FSCS needs to sort matters out depends on the complexity involved, but they aim to pay compensation in the majority of cases within seven days of a bank, building society or credit union failing. More complex claims against deposit takers are paid within 20 working days.

Although the FSCS gives some degree of protection, this should not distract investors from assessing default risk extremely carefully. Higher than normal returns may mean higher than normal risk, particularly with foreign banks where the deposit may not be covered by the FSCS.

A2B Inflation risk

See chapter 5, section A2

The purchasing power of interest earned on cash investments is undermined by rising prices. If an investor is locked in for a considerable period, the final return may be unsatisfactory in real terms if inflation has risen unexpectedly.



Activity

Visit the Office for National Statistics website at www.ons.gov.uk to look up the current rates of inflation using the retail prices index (RPI) and consumer prices index (CPI) methods and compare the results with the general level of interest rates available on cash deposits. What conclusions can you draw?

Long-term cash investors, in particular, face the real possibility that the final amount with interest may buy less than the original sum would have done when invested.



Interest rates and inflation

In the 1970s and early 1980s, interest rates were often so much lower than inflation rates that even shorter-term deposit holders, who reinvested all of the interest they received, experienced substantial erosion of the real value of their deposits.

A2C Interest rate risk

Cash deposits carry the risk that the return earned will vary depending upon movements in interest rates. This is interest rate risk and is implicit with accounts that earn a variable rate of interest dependent upon base rate changes. However, fixed-term deposits at fixed rates of interest also carry **reinvestment risk**. This is the risk that the original investment may have been made at a time when interest rates are high, but at the end of the fixed term rates may have fallen and it may not be possible to secure the same level of interest on reinvestment.

This was a real issue that many savers faced in 2009. Many retired people had invested money in fixed-rate savings accounts for between three and five years and secured a steady flow of interest to supplement their pension income. On maturity of those deposits, investors experienced difficulty in reinvesting the proceeds in accounts that earned similar amounts, as the comparable rates on offer were often as low as half those previously paid. The practical result of this was that many pensioners experienced a significant reduction in their spendable income as a result of falling interest rates.

A2D Offshore accounts

Many people have been tempted to invest in offshore sterling accounts or to invest in another currency, to earn higher rates of interest. However, chasing higher rates of interest by investing in accounts that are denominated in a foreign currency or which are provided by overseas financial institutions carries additional risks over and above those already discussed.

Where investment in such an account is appropriate for an investor, particular attention should be paid to assessing the credit risk of the institution and the arrangements that are in place in the event of default. The extent of any depositor protection scheme needs to be assessed along with the reliability of any government guarantee.

Cash investments in a foreign currency provide income and should maintain capital value – but only in the foreign currency. The actual return to the investor in the home currency depends on the exchange rate at the time the account is converted back, and currency exchange rates can change quickly and drastically.

Three common dangers are as follows:

- High rates of interest might seem attractive but they are usually offered by high inflation countries with potentially collapsing currencies.
- An investor might accept a low interest rate in a ‘strong’ currency in the expectation that currency gains will always make up for the low return. In fact, strong currencies do not strengthen continuously against sterling: they fluctuate in value like all financial assets. Currencies regarded as strong may not rise enough to compensate for their lower interest rates.
- Some countries do not have the same level of supervisory structure as the UK, meaning institutional collapse may be more probable.

Table 1.2: Factors to consider when investing in foreign currency accounts	
When investing in foreign currency cash investments, investors should therefore consider:	<ul style="list-style-type: none"> • what the markets and other investors consider to be the expected movement in the currency against sterling over the lifetime of the proposed investment, and the range of their opinions;
	<ul style="list-style-type: none"> • the volatility of the currency’s past value against major currencies;
	<ul style="list-style-type: none"> • if details of the foreign currency are not easily available, the prospect for sterling generally over the relevant period (if sterling is expected to appreciate against other currencies generally, the investor should expect to lose on converting the capital sum back to sterling; whether the interest earned will compensate adequately for this must be considered);

- | | |
|--|---|
| | <ul style="list-style-type: none"> • where the investment is being made at a variable rate, the likely changes to interest rates over the relevant period; |
| | <ul style="list-style-type: none"> • the ability of the deposit-taking body to repay the capital when it matures; |
| | <ul style="list-style-type: none"> • whether there are statutory or industry compensation schemes, the level of payment, and the circumstances in which they are paid. |

Despite these risks, foreign currency cash investments can be suitable for people who want income in a particular currency to meet liabilities denominated in that currency. They can also be appropriate for investors who specifically want to speculate on exchange rates, while earning some income in the meantime.

A3 Types of bank and building society accounts

The types of accounts available from banks and building societies have changed little in recent years, although technology allows people to access their money in different ways.

Banks and building societies provide a range of accounts for investors with interest rates on some tiered according to the size of the balance held in the account. These are generally available as either:

- instant access accounts; or
- restricted access accounts.

Many people have money in instant access accounts earning low interest rates. In general, the longer a deposit is committed to the bank or the further it is away from the High Street, the better the rates offered.

A3A Instant access accounts

Instant access accounts give investors immediate access to their funds and are operated through branches, by post, by phone and through the internet.

Interest rates generally follow the trend of bank base rates, with the best rates usually available from internet-based accounts and the worst from bank branch-based accounts. One problem for banks is that in today's low interest rate environment, cost pressures make it virtually impossible to offer attractive interest rates for branch-based accounts.

The main characteristics of instant access accounts are:

- an investor can withdraw cash immediately via a branch or by using a cash card;
- rates are variable, almost without exception, and can be significantly lower than other types of deposit accounts;
- the highest rates are usually found on postal, telephone and internet accounts.

Only accounts where cash can be withdrawn immediately can be described as 'instant access'. Many

postal, telephone and internet accounts have a short delay before an investor can access their cash, because of the time taken to clear funds through the bank clearing system. Unless cash can be withdrawn using a cash card these accounts cannot be described as ‘instant access’ and are often called ‘easy access’ accounts.

It is important to be wary of the ‘teaser rate’ accounts from providers which often appear at the top of league tables. These accounts may have low limits on how much can be deposited and earn the most attractive interest rate (the headline rate); they may offer short-term bonuses or require parallel investments in other (less competitive) products. For this reason, the Financial Conduct Authority (FCA) requires banks to ensure any communication or financial promotion concerning bank accounts meets its standards of being fair, clear and not misleading.



Activity

Use a web-based savings account comparison site, such as www.moneysupermarket.com, to review the ‘best’ rates on offer. Compare rates where there are no bonuses with those that have bonuses but apply some restrictions or conditions on withdrawals or investment period.

A3B Restricted access accounts

The main characteristics of restricted access accounts include:

- rates are generally higher than for instant access accounts and for the most restricted types of account the rates are among the highest available on cash investments;
- risks are higher because of the restricted access. This is because over time many things can change, including the credit rating of the bank or building society, the returns available elsewhere or the rate of inflation.

Interest rates on many restricted access accounts are variable, but some fixed rates are usually on offer.

The main types of restricted access accounts are:

- notice accounts; and
- term accounts or time deposits.

Table 1.3: Characteristics of notice and term accounts

<p>Notice accounts</p>	<ul style="list-style-type: none"> • A notice account will usually pay a slightly higher variable rate of interest than an instant access account in exchange for the investor having less access to their money. • Some notice accounts work on a very simple basis and require a period of notice before funds can be withdrawn. Periods of notice of 30, 60 and 90 days are the most common. The longer the notice period, the higher the interest rate. • Penalties may be levied for early access and this is typically equivalent to the interest for the period of notice on the amount withdrawn. Many also have much more complex rules, for example, permitting a limited number or amount of withdrawals without notice. • One risk for the investor in the longer notice accounts is that the deposit taker may offer a higher initial rate to attract funds and then cut the returns sharply, leaving investors locked in for the notice period.
<p>Term accounts or time deposits</p>	<ul style="list-style-type: none"> • Banks and building societies also offer fixed-rate accounts. These may also have a fixed term, typically from one to five years, and offer no or very limited access to capital before maturity. • Term accounts provide even higher interest rates for investors who are prepared to leave money on

deposit for a fixed period, generally at fixed rates.

- Banks tend to offer the widest range of periods, ranging from seven days to several years, although some require substantial minimum amounts.
- Smaller banks and building societies tend to offer the highest rates, but with a more restricted choice.
- Some fixed-rate term accounts are offered by banks and building societies (often referred to as 'bonds', but not to be confused with investment bonds or corporate bonds – they are another form of cash savings account). Terms are typically for one to three years. Interest rates may be tiered according to the size of the deposit and the term of the investment.
- Fixed-rate accounts are suited to investors who want certainty of income, but are not appropriate for 'rainy day' cash. The rates offered are driven by the money market and may be higher or lower than variable rates, depending upon the market's expectations of future interest rates.
- With interest rates remaining low (0.25% base rate), it is interesting to see that two-year fixed deposits are offering up to 1.5%. This does indicate a market expectation that rates may rise in the near future but is also an indication of how banks need to attract cash deposits.

Structured deposits

Most bank accounts pay interest reflecting market interest rates. Structured deposits pay interest based on the performance of an equity index (usually the FTSE 100). The typical structure offers the investor a return over a fixed term, which is the greater of:

- their original investment; or
- a multiple (e.g. 110%) of the change in the FTSE 100.

These products appear to offer a risk-free way to participate in the rise of stock markets. However, they tend to require a commitment for five years or more, over which time inflation can take its toll and the only guarantee is the original investment. Structured deposits are offered by a number of high street banks, often with names such as Guaranteed Investment Account or Deposit Plan.



Be aware

Structured deposits are similar to structured products in that they offer 100% capital protection and the return is linked to one or more indices, securities or commodities. Where they differ is how capital protection is provided. A structured product usually relies on protection provided by a third party who issues debt securities to be held within the structured product wrapper and so the investor is exposed to the risk of default by that counterparty. With a structured deposit, however, the deposit-taking firm has an obligation to repay the depositor. For more information on structured products, see [chapter 6.2](#).

A3C Foreign currency deposits

A foreign currency deposit is a savings account denominated in a currency other than sterling, e.g. a US dollar or euro deposit. Accounts may be instant access savings accounts, or fixed-term deposit accounts. They are available from UK and overseas banks, although the minimum balance required to open an account is often quite high, i.e. US\$10,000 to US\$15,000.

The interest rate paid reflects the prevailing market rate for the currency in which the account is denominated.

A3D Offshore sterling deposit accounts

Offshore accounts in sterling are generally available from UK branches of banks and building societies situated in tax havens such as the Channel Islands or the Isle of Man. The accounts range from variable rate instant access and notice accounts to fixed-rate time deposits, in much the same way as UK accounts.

These accounts may pay higher interest rates than the equivalent account in the UK.

A3E Individual savings accounts (ISAs)

Individual savings accounts (ISAs) are not an investment but a tax wrapper.

Features	<ul style="list-style-type: none">• Cash ISAs allow savers to receive tax-free interest.• In 2017/18 the overall annual subscription limit is £20,000. All of this can be invested in cash.• They are available to individuals who are resident in the UK for tax purposes, but can only be arranged on an individual (not joint) basis.• There is no minimum investment and no minimum holding period.• Withdrawals can be made at any time without any loss of tax relief.• Withdrawals can be made and replaced in the same tax year with no impact on the annual ISA subscription limit for that tax year.
Rules	<ul style="list-style-type: none">• It is possible to transfer some or all of the money saved in previous tax years to another ISA manager at any time.• It is also possible to transfer money saved in the current tax year, but such transfers must be for the whole amount saved in that tax year, up to the date of the transfer.• ISA savers can transfer their cash ISA to another cash ISA or, if they are aged 18 or over, to a stocks and shares ISA or to an innovative finance ISA (IFISA). An IFISA allows lenders to enjoy tax-free returns up to the annual ISA subscription limit.• A stocks and shares ISA can be transferred to a cash ISA.
Eligible investments	<ul style="list-style-type: none">• Bank or building society accounts.• Units or shares in UK authorised unit trusts and open-ended investment companies (OEICs) which are money market schemes (they invest in cash deposits) and fund of funds schemes, which invest in them.• Units or shares in a unit trust, OEIC, Undertakings for Collective Investments in Transferable Securities (UCITS) scheme or a life assurance policy that would be likely to return at least 95% of the investor's original capital within five years from the date of investment.• The NS&I ISA product.• Stakeholder cash deposit products.

Cash ISAs are available to 16 and 17-year-olds. However, if the money is given to them by a parent, and the interest together with any other income from gifts provided by the parent is more than £100 a year, the income will not be tax-free and will be treated as the parent's income until the child reaches age 18.

Help to buy ISAs and Lifetime ISAs are covered in [chapter 6, section L](#).

A4 National Savings and Investments (NS&I) products

NS&I products are Government investments that can be bought online, by phone or by post directly from NS&I. They are secure investments because they are guaranteed by the Government. At the time of writing, the following products are available:

- Premium bonds;
- Direct saver account;

- Investment Guaranteed Growth Bonds
- Investment account;
- Direct ISA;
- Income bonds; and
- Children's bonds.

These products are no longer on sale:

- 65+ guaranteed growth bonds;
- Guaranteed growth and income bonds*; and
- Savings certificates*.

* Issues of these products are only available to customers with maturing products. They are not on general sale. Customers can renew up to the value of their maturing product including the interest earned or they can cash in. Extra money cannot be invested.

A4A NS&I Direct ISA

- NS&I Direct ISAs can only be opened and managed online or by phone, but additional funds may be added by standing order.
- Transfers from other providers are not permitted.

A4B NS&I Savings Certificates

Currently issues of Savings Certificates are only available to customers who have maturing certificates. They are not on general sale. Those customers can renew up to the total value of their maturing certificate, including earned interest, or they can cash in some of the investment and renew the balance.

	For customers who invested or renewed before 20 September 2012:	For customers who invested or renewed on or after 20 September 2012:
Fixed-Interest Savings Certificates	<p>On an anniversary date:</p> <ul style="list-style-type: none"> • The anniversary value for that year is paid, which will include the fixed interest at the rate that applies for that year. <p>Between anniversary dates:</p> <ul style="list-style-type: none"> • The most recent anniversary value is paid, plus any fixed interest for each complete period of three months since then. 	<ul style="list-style-type: none"> • There will be a deduction penalty equivalent to 90 days' interest on the amount cashed in early. • If cashed within the first 90 days, the amount returned will be less than the amount invested. • If part of a certificate is cashed in, at least £100 must be kept invested.
Index-linked Savings Certificates	<p>On an anniversary date:</p> <ul style="list-style-type: none"> • The anniversary value for that year is paid, which includes any positive index-linking and fixed interest at the rate that applies for that year. <p>Between anniversary dates:</p> <ul style="list-style-type: none"> • The most recent anniversary value is paid, plus any positive index-linking and fixed interest for 	<ul style="list-style-type: none"> • There will be a deduction penalty equivalent to 90 days' interest for early withdrawals. • The index-linking on the whole certificate for that year will also be lost. • Customers must keep at least £100 invested.

- each complete month since then.
- If the RPI figure has gone down since the previous anniversary, the full anniversary value, plus fixed interest for each complete month is paid.

A4C NS&I Children's Bonds

- Bonds mature once they reach the first five-year anniversary on or after the child's 16th birthday.
- Bonds can be cashed in early with a penalty equivalent to 90 days' interest on the amount that is cashed in.
- For five years the Children's Bond earns a single annual rate of interest for each issue.
- Interest is earned on a daily basis and added to the bond on each anniversary date.



Interest – tax position

Interest is tax-free, even if a parent invests on behalf of their child.

A4D NS&I Income Bonds

Income bonds pay a monthly income at a variable rate of interest with no risk to capital. The same rate of interest is paid no matter how much is invested.

For new income bonds, investors must be aged at least 16. However, children under 16 with existing income bonds can still keep them and continue to make deposits and withdrawals. For children under seven years old, as at 6 April 2013, the parent or guardian must manage their account until they reach 16.

Income bonds can be cashed in at any time with no notice period or penalty. Interest is paid gross but is taxable and therefore counts towards the personal savings allowance.

A4E NS&I Investment Bonds

A new NS&I investment bond – Investment Guaranteed Growth Bonds – is available from April 2017 for twelve months with the following characteristics:

- three-year fixed term;
- fixed rate of 2.20% gross fixed for three years;
- only managed online;
- available for anyone over the age of 16 holding a UK bank account; and
- maximum holding limit of £3,000 per person.

A4F NS&I Bank Accounts

NS&I have two types of bank account:

- an investment account managed by post only; and
- a direct saver which can be opened online or over the phone.

A5 Money market investments

Banks, building societies and other institutions need to hold significant cash surpluses to meet sudden cash demands (deposit withdrawals etc.). They prefer to earn a return on these funds, but need the security of high liquidity, i.e. the ability to encash instantly at relatively certain prices. The money markets are the wholesale markets where banks, building societies, the Government and others lend to and borrow from each other. They lend and borrow for periods ranging from a few hours to several months using short-term debt instruments.

The specialist nature of the market and high minimum investment levels means the amount of private investor involvement is limited. Private investors can, however, gain access to this market through one of the many collective investment vehicles that specialise in this area.

A5A Characteristics

Money markets play an essential role in the smooth operation of government finances and the banking industry, as well as providing short-term capital for companies.

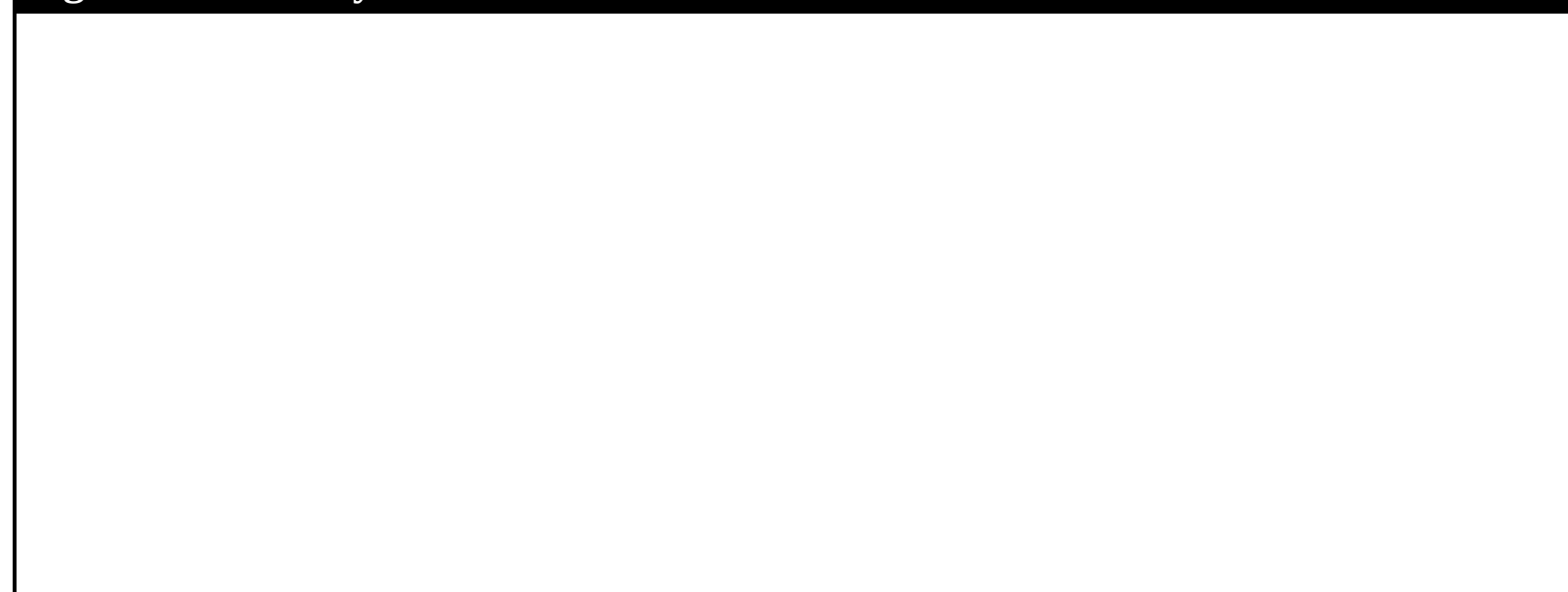
Money market instruments allow issuers to raise funds for short-term periods at relatively low interest rates. The issuers include governments, banks and companies, each of which may issue debt instruments to manage their short-term cash needs. Investors in these instruments are the banks themselves, companies, local authorities, money market funds and individuals who are attracted to the market because the instruments are highly liquid and carry a relatively low credit risk.

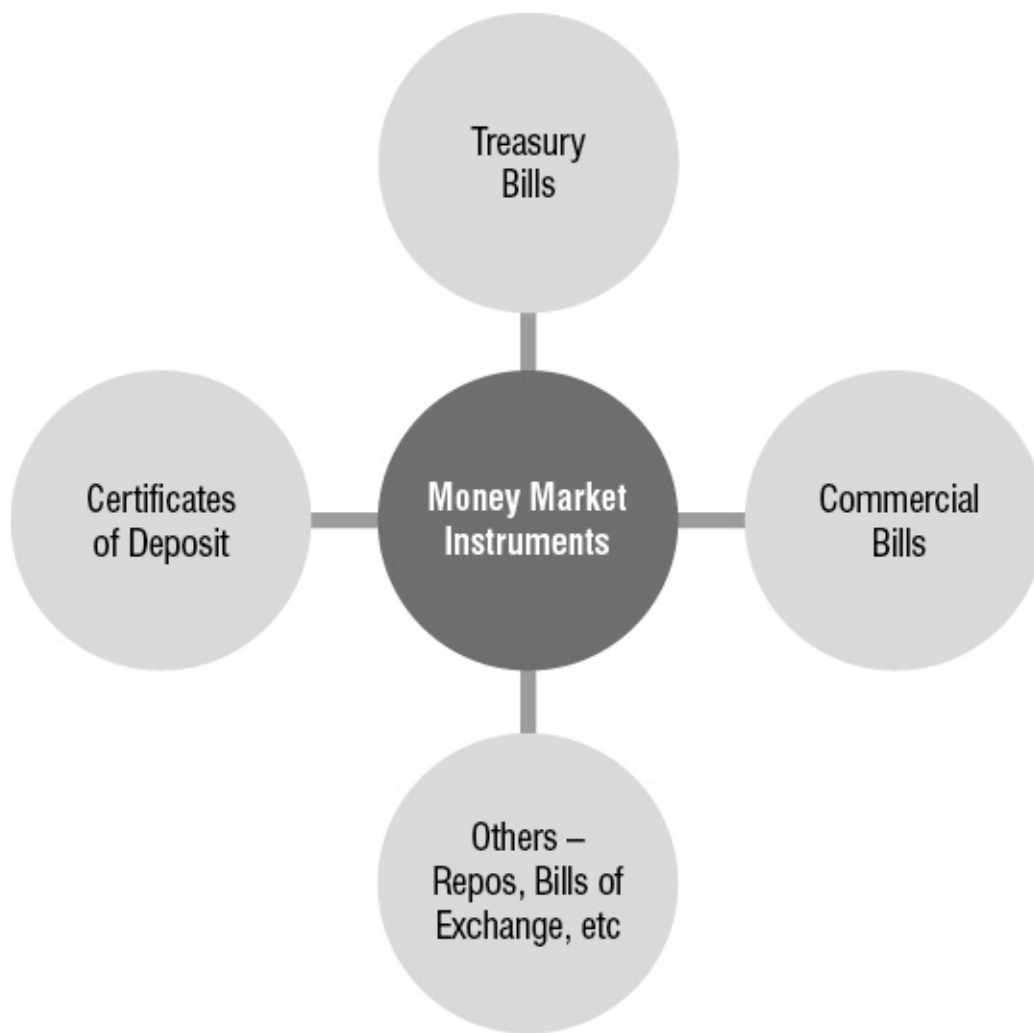
The money markets allow borrowers to obtain funds for a fixed period at a fixed rate, while the lenders have instant access to the funds at any time by trading (selling) the security in the money market.

A5B Types of money market instruments

Among the main types of security that are traded in the money markets are Treasury bills, commercial bills and certificates of deposit.

Figure 1.3: Money market instruments





Treasury bills

Treasury bills are issued by governments to finance their short-term cash needs.

In the UK, the issue of Treasury bills is managed by the Debt Management Office (DMO), an agency of HM Treasury, which uses the Treasury bill market to manage the Government's daily cash flow needs. Treasury bills are routinely issued at weekly auctions and have maturities of one, three or six months (and also twelve months – although so far no twelve month tenders have been held). Members of the public who wish to purchase them must do so through one of the Treasury Bill Primary Participants and purchase a minimum of £500,000 nominal of bills.

Treasury bills do not pay interest. Instead they are issued at a price that is less than their par or face value and at maturity the Government pays the holder the full par value. The interest is equal to the difference between the purchase price and the maturity value.



Example 1.1

If a three-month Treasury bill is issued at a price of £99.876105, it means that a purchase of £1m of three-month Treasury bills would cost £998,761.05.

At maturity, in three months' time, this will be redeemed by the Government for £1 million and the difference between the two amounts (£1,238.95) represents the interest earned. On an annualised basis this amounts to 0.497%.

Treasury bills are backed by the UK Government, are short-term and are highly liquid; they are therefore deemed risk-free cash investments. Their prevailing rate of return is often used as the benchmark 'risk-

free rate of return' when measuring the risk premium needed for other financial instruments.

Certificates of deposit

Certificates of deposit (CDs) are receipts from banks for deposits placed with them.

The deposits themselves carry a fixed rate of interest, usually related to LIBOR, they have a fixed term to maturity and so cannot be withdrawn before maturity. However, the certificates can be traded in the money markets if the investor needs access to the funds before maturity. The yields on CDs are slightly less than on an ordinary deposit because of the added benefit gained from being able to trade the CD and so access the capital. Most are issued with maturities of one to three months, with the interest paid on maturity.

Banks and building societies issue CDs to raise funds to finance their business activities, and the yield will depend upon market rates and the credit rating of the issuing bank.

Commercial bills

Commercial bills are short-term negotiable debt instruments issued by companies to fund their day-to-day cash flows. They operate in a similar way to Treasury bills although the market is less liquid.

Commercial bills are issued at a discount to their maturity value, with typical maturities of between 30 and 90 days. They are unsecured and usually issued only by companies with high credit ratings. The yields are typically higher than the Treasury bill equivalent to reflect the higher credit risks involved and their reduced liquidity.

A5C Investment vehicles

The Money Market is a specialised market where most of the securities trade in very high denominations and the scope for direct investment by private investors is limited. There is, however, a range of collective investment vehicles available to both private and institutional investors, which pool together investors' funds to invest on their behalf.

Each Money Market fund can invest differently – some may invest solely in cash deposits in the Money Market and others may use a whole range of Money Market instruments to achieve their returns. It is important to understand the underlying composition of the portfolio when assessing returns and risk.

Rules have been implemented across the European Union (EU) so that investors are clear about what type of Money Market fund they are investing in. Since 2012 enhanced Money Market funds, which hit problems during the financial crisis, can no longer be described as Money Market funds. Instead, funds that want to call themselves Money Market funds have to meet a set of rules that defines clearly the types of assets, duration and controls that should be expected from them.

Figure 1.4: Types of Money Market funds



Short Term Money Market Fund

Money Market Fund

Managers must qualify their funds as ‘Money Market’ or ‘short-term Money Market’, according to the maturity and life of the fund assets.

- Short-term Money Market funds have a weighted average maturity of no more than 60 days and a weighted average life of no more than 120 days.
- For Money Market funds, those periods are extended to six months and twelve months.



Activity

Use a website service to identify a list of Money Market funds. Select one that is offering a low yield and one that is offering a higher yield. Look at the key facts about the funds and identify the differences in their underlying portfolios. What are the major differences?

To assess whether a Money Market fund is suitable for a client, you need to consider a number of factors, including:

- how the returns on Money Market funds compare with other cash-based investments;
- what charges are made and how this impacts on the returns;
- how long it will take to realise the assets if the client needs access to the funds;
- what assets are contained in the underlying portfolio and the degree of risk to which the fund is exposed; and
- how experienced the fund management team is.

Table 1.5: Risk and return

<p>Returns</p>	<ul style="list-style-type: none"> • The returns on a Money Market fund will vary depending upon the composition of the underlying portfolio. • A fund that invests in pure cash assets will generate a lower return than one that uses commercial bills and very short-term debt instruments. With base rates at 0.25% (as at April 2017), the return on Money Market instruments is not competitive. • The costs of investing in a Money Market fund will need to be taken into account when assessing the suitability of the fund and comparing it with cash investments. While charges will vary from fund to fund, there would usually be no initial charges and low annual charges in the region of 0.15%.
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Risks

- Money Market funds carry many of the same risks as other cash investments. In other words, they have credit risk, inflation risk and interest rate risk and may also have currency risk depending upon their investment objective and the underlying investments.
- Where they differ is in how each fund may be affected by credit risk.

The starting point for considering the credit risks associated with Money Market funds should be to compare the relative levels of risk between a savings account and a Money Market investment.



Risks of Money Market funds versus cash investments

A couple of factors to consider:

- Placing funds in a cash investment means that the investor is exposed to the risk of that bank or savings institution defaulting.
- By contrast, a Money Market fund will invest in a range of instruments from many providers. On the one hand this can diversify against the risk of a single institution going bust, while on the other hand the level of risk will depend upon the types of instrument into which the fund invests and the credit rating of the issuing institutions.



Question 1.1

Consider the statement 'cash investments are riskless'. Is this true or false? Explain your answer.

B Fixed-interest securities

Fixed-interest securities are issued by governments, companies and other official bodies as a method of raising money to finance their longer-term borrowing requirements. In return for lending money to these institutions, the owner of the fixed-interest security is entitled to receive regular interest payments and usually a repayment of their capital at the end of a pre-determined period.

They cannot be cashed in before their official maturity date; however, investors can sell them on the stock market at any time without needing to refer to the original borrower.

Fixed-interest securities can be described as 'negotiable fixed-interest, long-term debt instruments'.

- **Negotiable:** after making the original loan to the borrower by buying a security, a lender can then sell the entitlement to the interest and capital repayment to a third party, who is also free to sell it on to another.
- **Fixed-interest:** the borrower is committed to pay interest at a fixed rate for the duration of the loan.
- **Long-term:** they typically run for between 2–30 years.
- **Debt instrument:** these are financial instruments representing debt.

Fixed-interest securities are also known as bonds, loan stock, debentures and loan notes. Other names such as gilts and corporate bonds signify loans to particular types of borrowers; securities issued by the UK Government are called 'gilts' or 'gilt-edged securities' and securities issued by companies are known as corporate bonds. We will now use the term 'bond' to refer to fixed-interest securities.

Companies and other institutions often raise the long-term finance they need by issuing bonds directly to the capital markets, rather than borrowing from banks for a number of reasons, such as:

- Banks may not be able to lend for the particular term (period) or amount that is required.
- The bond market offers a wider range of lenders to tap into; London is the world's largest market for international funds.
- Bonds are often the cheapest method of borrowing money.



UK trend

There is a clear trend in the UK, following US practice, for companies to go to the capital markets, rather than to their banks, for large loans.

B1 General characteristics

Bonds have certain common characteristics. They generally:

- carry a fixed rate of interest, known as the coupon;
- have a fixed redemption value, the par value; and
- are repaid after a fixed period, at the redemption date.

B1A Bond titles

The title of a bond will always give three key features:

- issuer's name;
- coupon; and
- maturity date.

For example: Vodafone Group Plc 5.625% 2025.

Table 1.6: Features of bonds

Name	<ul style="list-style-type: none"> • This identifies who has issued the bond. • The issuer is responsible for paying interest and repaying the capital. These can range from the most secure, i.e. government securities, through to the most debt-laden company. • In this example, Vodafone Group Plc has issued the bond.
Nominal value	<ul style="list-style-type: none"> • The nominal value of a bond is £100 and is not the same as its market price. • The nominal amount or par value is used to determine the interest and maturity payments, and, as a bond nears the end of its life, its market price will approach the nominal amount. • At other times the market price may be higher or lower than the nominal figure.
Coupon	<ul style="list-style-type: none"> • This is the rate of interest payable on the bond. • It is set at the time of issue and depends on market forces at that time. It is usually fixed for the life of the bond. • It is expressed gross, and is calculated as simple interest on the nominal value of the bond. In the example above the coupon is 5.625%. • Most bonds pay interest twice a year, on dates that are set by the issuer at the time the bond is issued. Some corporate bonds pay once a year.
Maturity date	<ul style="list-style-type: none"> • This identifies the specific date on which the issuer will repay the nominal value of the bond to the investor

who owns it at the time.

- It is decided on by the issuer of the bond and usually coincides with one of the interest payment dates in the maturity year. The Vodafone corporate bond has a redemption date of 4 December 2025.
- In the past some gilts have been quoted with two dates, known as 'double-dated gilts' – in these cases the Government chooses the exact timing of redemption at a point between two given dates.
- With an 'undated' gilt – there was no stated redemption date. The last remaining 'undated' bonds in the UK gilt portfolio were redeemed in 2015.

B2 Pricing and trading

B2A Pricing

Bonds are traded by their nominal value or par value, which is the face value on the bond certificate.

- A bond holding of £10,000 would refer to the nominal value of the bond owned, not how much it cost.
- Bond prices are quoted at a price for £100 nominal value, although any amount can be purchased.

Before redemption, the market price of £100 nominal will vary; it may be above or below the par value. The nominal or par value determines:

- the price at which the bond will be redeemed by the issuer at the redemption date; and
- the amount of interest that will be received.

B2B Trading

Prices are quoted in the *Financial Times* and other major newspapers, but these are not the exact prices that an investor would pay. There are two reasons for this:

- They are **mid-market prices**, i.e. the mid-point between the buying and selling prices quoted in the market. An investor would pay a higher price to purchase a bond, and receive a lower price on a sale.
- They are **clean prices**, and ignore the value of accrued interest, which is the interest that builds up between interest dates. The interest on bonds is calculated daily and must be added to or subtracted from the clean price to arrive at the total purchase price of the bond.

In the current low interest rate environment, many bond prices are above the nominal figure. For instance, Treasury 8% 2021 was first issued in February 1996 at a price of £98.53125. In April 2017 its price was £132.74; the investor who buys this bond now and holds it until June 2021 will suffer a capital loss of £32.74 for each £100 nominal value bought. The investor is compensated to some extent by receiving a higher income than is generally available. Equally, an investor who bought some time ago could lock in the profit and reinvest in another bond.

B2C Accrued interest

Interest on most bonds is paid twice a year, but accrues daily between interest payment dates.

Table 1.7: Cum and ex dividend

Cum dividend	<ul style="list-style-type: none">• When a bond is cum (with) dividend, the purchaser will receive the full six months' interest, even though the bond was owned by them for less than the entire period.• Consequently, when the bond is purchased, the buyer has to compensate the seller for the interest to which they were entitled, but has not received.• The buyer will pay the clean price plus the interest that has accrued from the date of the last interest payment up to the settlement date (usually the business day after purchase).
Ex dividend	<ul style="list-style-type: none">• Interest payments are usually made to whoever is the registered holder of the bond seven working days before the interest payment date.• If the bond is purchased after that time but before the payment date, it is bought ex (without) dividend, and the full six months' interest will be paid to the seller.• Anyone buying the bond after it goes ex dividend is deprived of interest from the date of purchase to the interest payment date, and the price is adjusted to reflect this.• Interest in respect of the period for which the buyer owned the bond, but which was paid to the seller, is deducted from the clean price.

The total amount paid by a purchaser, which is the clean price plus or minus any interest adjustment, is referred to as the **dirty price**.

B3 Bond markets

The arranging and selling of original issues of bonds takes place in the primary market, and the trading afterwards takes place in the secondary market.

B3A Primary market

The way in which bonds are issued for the first time depends upon the issuer.

Governments are the largest issuers in the bond markets. In the UK, the issue of new gilts is managed by HM Treasury's DMO. The DMO issues new gilts weekly to meet the long-term financing needs of the Government and uses an auction process. The key features of this process are:

- Large investors put in bids at the price and for the quantity they want.
- Successful bidders pay the price they bid.
- Individuals can submit non-competitive bids for amounts up to £500,000 and, if they are successful, are allocated stock at the average of accepted prices.

Other organisations or companies issue bonds less frequently. They appoint an investment bank to manage the issue, which may use a syndicate of banks to market the bonds to potential investors if the issue is a large one. The key features of this process are:

- The issue and the prospective coupon are marketed to potential investors.
- Potential investors place indicative bids to buy bonds at a certain price.

- The final terms are agreed and issued to the prospective investors, who then have 24 hours to make firm bids.

B3B Secondary market

Once a bond has been issued, any subsequent trading of that bond takes place in the secondary bond markets. London is the world's leading centre for bond trading as most Eurobond trading takes place there.



How it works

Bond trading

The daily value of bond trading is significantly greater than the daily turnover in the domestic UK equity market. Trading is brisk because holders of bonds are constantly adjusting their holdings to reflect their changing views on a number of factors, as follows:

- what income they need and when;
- credit ratings of issuers;
- future interest rate trends;
- changes to expected inflation rates;
- conduct of government finances;
- international tensions and the social and political environment generally; and
- relative attraction of other assets.

The trading of bonds after their original issue does not, of course, affect the original issuer or change the terms of the issue.

There is substantial trading activity in bonds in the UK in four major markets. Three of these are sterling markets that collectively make up the UK bond market:

- **Government sector.** The UK Government is the biggest borrower in the UK bond market.
- **Corporate sector,** where UK companies have become major borrowers from the capital markets leading to subsequent secondary market trading.
- **Sterling loans to foreign borrowers.** The UK markets also manage sterling loans to foreign governments or companies.

The fourth major market, the **Eurobond market**, deals in bonds issued in a wide range of currencies to a wide range of foreign and domestic companies and governments.



Eurobonds

A Eurobond is an international bond, denominated in a currency other than that of the country where it is issued. For example, a British company may issue a Eurobond in America denominated in Japanese Yen. This would then be a Euroyen bond as Japanese Yen is not the usual currency of America.

Eurobonds are named according to the currency in which they are issued, i.e. a bond issued in American dollars would be a Eurodollar bond, while bonds issued in sterling are Eurosterling bonds.

Multinational companies, national governments and international institutions such as the World Bank and the European Commission use Eurobonds to raise capital in international markets. The total issue and turnover is high, making this a very liquid market.

B3C Bond indices

As with equity markets, there are a range of bond indices that cover different segments of the global bond markets. Examples include the FTSE Actuaries UK Gilt Index for the UK or the Barclays Capital Aggregate Bond Index for global bonds.

B4 Bond yields

All fixed-interest securities bear a nominal rate of interest – the coupon – which relates to the rate of interest on £100 nominal value.

The yields on bonds measure the returns they provide in relation to their market price. Two yields are regularly published in the financial press:

- interest yield; and
- redemption yield.

B4A Interest yield

The interest yield, which is also referred to as the **running yield**, the **flat yield** or the **income yield**, expresses the annual income from a bond as a percentage of the price an investor would have to pay for the bond.

The yield will be different to the coupon, as investors rarely buy for exactly £100.

The formula for the interest yield is:

$$\frac{\text{coupon or nominal yield}}{\text{clean price}} \times 100$$



Example 1.2

If an investor pays £126.85 (clean price) for £100 nominal value with an 8.0% coupon, then the interest yield would be calculated as follows:

- The return is £8.00 per year (interest is paid on the nominal value of £100).
- The cost to the investor is £126.85.
- Expressed as a percentage return this is:

$$\frac{8.00}{126.85} \times 100 = 6.31$$

- The interest yield on this investment is 6.31%.

For an investment of £126.85, the investor receives £8.00 (gross) each year, which is equivalent to a return on their investment of 6.31%.

Interest yields can, however, be misleading, as bonds may produce a capital gain or loss if held until redemption, depending on the price at which they are purchased.

- Bonds may trade above or below their par or nominal value. This is because their prices are not fixed and will alter with the economic climate, responding in particular to changes in general interest rates and the creditworthiness of issuers.
- If the coupon is above current interest rates and the issuer has a strong credit rating, the bond will trade above par, as in the example above.

If an investor buys a bond priced at above par and continues to hold it until its redemption date, they will see a capital loss. However, the bond could be sold to another investor at any time, and does not have to be held by them until it is redeemed by the issuer.



Question 1.2

An investor buys a holding of £1,000 5% Treasury Gilt 2018, which is priced at £120.10. What is the interest yield?

B4B Redemption yield

The redemption yield is a more accurate calculation of the yield on a bond. It takes into account both the income payments from a bond and the capital gain or loss from holding the bond until maturity. It also adjusts the value of each payment according to when it is received.

The capital gain or loss occurs in the last year, while the income payments are usually received half-yearly over the life of the bond. The redemption yield assumes that the investor reinvests each interest payment as it is received, by buying more of the stock at the same redemption yield.

This involves rather complex compound interest calculations for each half-yearly payment and is difficult to do without a financial calculator. Fortunately, redemption yields are readily available in the financial press.

The following method of calculating the redemption yield ignores the compound interest calculations. Simply, it combines the interest yield with a measure of the gain or loss that an investor would incur if the bond is held until redemption.

The formula for the simplified redemption yield is:

$$\text{interest yield} + \text{or} - \frac{\text{gain (or loss) to maturity} \div \text{number of years to maturity}}{\text{clean price}} \times 100$$



Example 1.3

Continuing from the previous example and assuming the bond has exactly five years to run until maturity:

- The bond was purchased for £126.85 per £100 nominal.
- At redemption there will be a capital loss of £126.85 – £100 = £26.85.
- There are five years to redemption.
- The capital loss each year is £26.85 ÷ 5 = £5.37.
- As a percentage of the price paid the reduction in return is:

$$\frac{-5.37}{126.85} \times 100 = -4.23$$

- The income yield calculated earlier was 6.31%, so this gives an approximate yield to redemption of 2.08% (i.e. 6.31%–4.23%).

Where the redemption yield is less than the interest yield, there will be a capital loss if the bond is held until its redemption date.

While the redemption yield allows bonds to be compared on a common basis, and is often used to measure the return on a bond, it is not particularly useful to the average investor since it ignores any tax that a private investor would have to pay.

Capital gains on gilts and on most (but not all) corporate bonds are tax-free to individual investors. Income, though, is taxable on all types of bond. Thus, two bonds may have the same redemption yield but very different post-tax returns, as one may be trading near par with little prospect for capital gain, the other trading well below par with the bulk of returns coming in the form of tax-free capital gains.

B4C Yields on collective funds

When the running yield on a pooled fund, such as a unit trust or OEIC is significantly higher than the gross redemption yield, some capital erosion may be suffered in the future to deliver a high level of income.

Most gilt and bond fund managers quote both measurements of yield as an average of the stocks they hold. Unlike direct holdings, the income is rarely fixed and there is no maturity date.

B5 Risks

The fall in interest rates since 2008 led to an increased interest in bonds due to the higher interest rates available. This ultimately meant a substantial increase in the amounts invested in this asset class through the medium of bond funds. While bonds can provide attractive returns it's also important to understand some of the key risks associated with them.

Table 1.8: Key risks

Interest rate risk	<ul style="list-style-type: none"> • When interest rates fall, investors in fixed-interest bonds see the capital value of their securities rise. Equally, when interest rates rise, the capital value of fixed-interest securities will fall. Long-term bonds tend to fluctuate more rapidly than securities with shorter maturity dates.
Liquidity risk	<ul style="list-style-type: none"> • Many bonds trade infrequently and so present liquidity risk because it can be difficult to sell them readily at an acceptable price.
Inflation risk	<ul style="list-style-type: none"> • The returns on conventional bonds are eroded as a result of the effects of inflation, although index-linked bonds provide protection because the interest and capital is adjusted for inflation.

Currency risk	<ul style="list-style-type: none"> • Most bond portfolios include global bonds to provide diversification but this carries currency risk, in other words movements in exchange rates affect the value of the holding.
Default risk	<ul style="list-style-type: none"> • All bonds carry the risk that the issuer will not meet their obligation to pay interest or capital at maturity.

Diversification across a range of issuers, sectors, countries and maturities is essential for fixed-interest securities. The importance attached to this can be seen by looking at the number of holdings found in a bond fund.

B5A Factors affecting bond prices

Bonds have to remain competitive by offering the same yield for the same risks as other investments. As the income from a bond remains unchanged throughout its life, the only way its yield can vary is through changes to the capital value. So the yield required by an investor determines the market price of a bond.

The yields required by investors change for a variety of reasons, particularly related to the rates that are available from competing investments.

- When interest rates rise, bond prices fall, and when interest rates fall, bond prices rise.
- These price movements will result in investors making capital gains or losses if they opt to sell before redemption.

Bond prices are affected by a variety of factors, which can be broadly divided into:

- specific or commercial risks that affect a particular issuer; and
- market or systematic risks that affect fixed-interest securities generally.

B5B Specific or commercial risks

The issuers of some bonds are in a better position to meet their interest payments and repay their borrowings than others.

Government bonds

- Governments are the most secure, because they can always raise additional money (through taxation, for example), to service and repay their debts.
- The creditworthiness of governments means that the interest payments on government bonds are the lowest, because investors need the least amount of compensation for the risk that the borrower will fail to meet their financial obligations.
- However, not all governments have the same rating. Those of some less developed countries have a history of defaulting on both interest and capital payments, and have found their bonds priced accordingly.

Non-government bonds

- Non-government bonds are riskier and pay a higher return to investors than those issued by governments.
- The greater the default risk associated with the issuer, the more an investor would expect to be

rewarded by a higher coupon or yield to compensate.

The creditworthiness of bond issuers is assessed and constantly updated by credit rating agencies such as Moody's and Standard & Poor's. See table 1.9.

Table 1.9: Credit ratings

Grades	Standard & Poor's	Moody's
Highest credit quality – virtually no risk of default.	AAA	Aaa
Highest rating, high quality.	AA+ AA AA–	Aa 1 Aa 2 Aa 3
Adequate capacity to meet financial commitments.	A+ A A–	A 1 A 2 A 3
Adequate capacity to meet financial commitments but some speculative characteristics against changes in economic conditions.	BBB+ BBB BBB–	Baa 1 Baa 2 Baa 3
Non-investment grade. Moderate capacity to meet financial commitments – credit risk.	BB+ BB BB–	Ba 1 Ba 2 Ba 3
Weak protection of interest and capital.	B+ B B–	B 1 B 2 B 3
Lowest credit quality, lowest protection of investors, a danger of credit default. Vulnerable category.	CCC CC C	Caa (1-3)

In credit default with little prospect for recovery.	D	C
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The top rating is AAA/Aaa, which is generally ascribed to governments and other similar organisations. The lowest rating of D/C means that the bond is already in default.

Overall credit ratings fall into two distinct categories:

- **Investment grade bonds:** these are bonds with a rating of BBB– or higher from Standard & Poor’s, or Baa 3 from Moody’s and are considered to have an extremely low risk of default.
- **Non-investment grade bonds:** these are bonds with ratings below BBB–/Baa 3 that are considered to have a significantly higher risk of default. They are also referred to as **high yield** or **junk bonds**.

The creditworthiness of issuers helps to quantify the risk of holding bonds. When the issuer of a bond experiences a change in their creditworthiness, the yield demanded by investors is likely to change:

- if a company’s credit rating is marked down, the market price of its bonds will fall because they are seen as riskier investments, and investors will require an increased yield to compensate;
- conversely, an improved credit rating will reduce the required yield because the investment risk is perceived to have reduced, and the price will rise.

B5C Market or systematic risk

Market or systematic risk, such as economic circumstances or government actions, affect all forms of fixed-interest securities. In particular, market prices will vary with changes in the levels of interest rates and inflation, and any anticipated future movements.

- If inflation or interest rates rise, bond prices tend to fall. The exception to this rule is an index-linked bond, where the value will rise with any increase in inflation.
- The yields on bonds take into account a rate of inflation for the currency in which they are denominated:
 - if there is an unexpected change in the expectations for inflation, then there will be a change in bond prices; and
 - bond prices tend to rise if expectations of inflation diminish, and fall if the rate of inflation is deemed to be speeding up.



Economic factors

Other economic factors that result in a movement in monetary policy, causing a change in interest rates, will also impact on bond prices. For example:

- An increasing balance of payments problem may lead to rising interest rates and therefore declining bond values.
- Economic growth can fuel inflation, leading to rising interest rates and so declining bond values.
- In contrast, if an economy is in recession, interest rates may be reduced to stimulate a recovery, which will boost bond prices.

B5D Volatility of bonds

When interest rates rise, bond prices usually move in the same direction – they will all fall. However, not

all bonds respond to the same extent. Non-investment grade bonds tend to be more volatile than investment grade bonds, although they are not as volatile as equities.

The extent to which bonds are sensitive to interest rate movements is determined by a combination of the coupon and the period to redemption:

- the lower the coupon the more volatile the bond; and
- the longer the period to redemption the more volatile the bond.



Consider this...

So which do you think are the:

- most volatile?
- least volatile?

Why do you think this is the case?

The most volatile are those with both long periods to their maturity dates and low coupons, while the least volatile are short dated, high coupon bonds. The rationale behind this is that a greater amount of the cash flow from the more volatile bonds is received later in the bond's life and is exposed to interest rate movements for a longer period. Points to remember:

- The holder of a bond with a high coupon will receive a return on the bond more quickly than the holder of a similarly dated low coupon bond, where most of the return is tied up until the final payment at the bond's maturity.
- The holder of a shorter-dated bond will receive a return on the bond earlier than the holder of a longer dated bond with the same coupon, and is exposed to interest rate movements for a shorter period.

B6 Yield curves

A yield curve provides a means of comparing yields on bonds of different maturities, as well as giving an indication of the market's expectations of changes in interest rates and hence required yields in the future.

A couple of points:

- Bonds issued by the governments of developed countries, such as the UK or USA, are considered to be risk-free and the yield curve gives an indication of the anticipated risk through economic factors and time.
- Corporate bonds also include the additional risk that the issuer may default on their obligations.

The yield curve is a graph of the relationship that exists between a bond's redemption yield and the period to redemption.

There are three main types of curve: normal, flat and inverted.

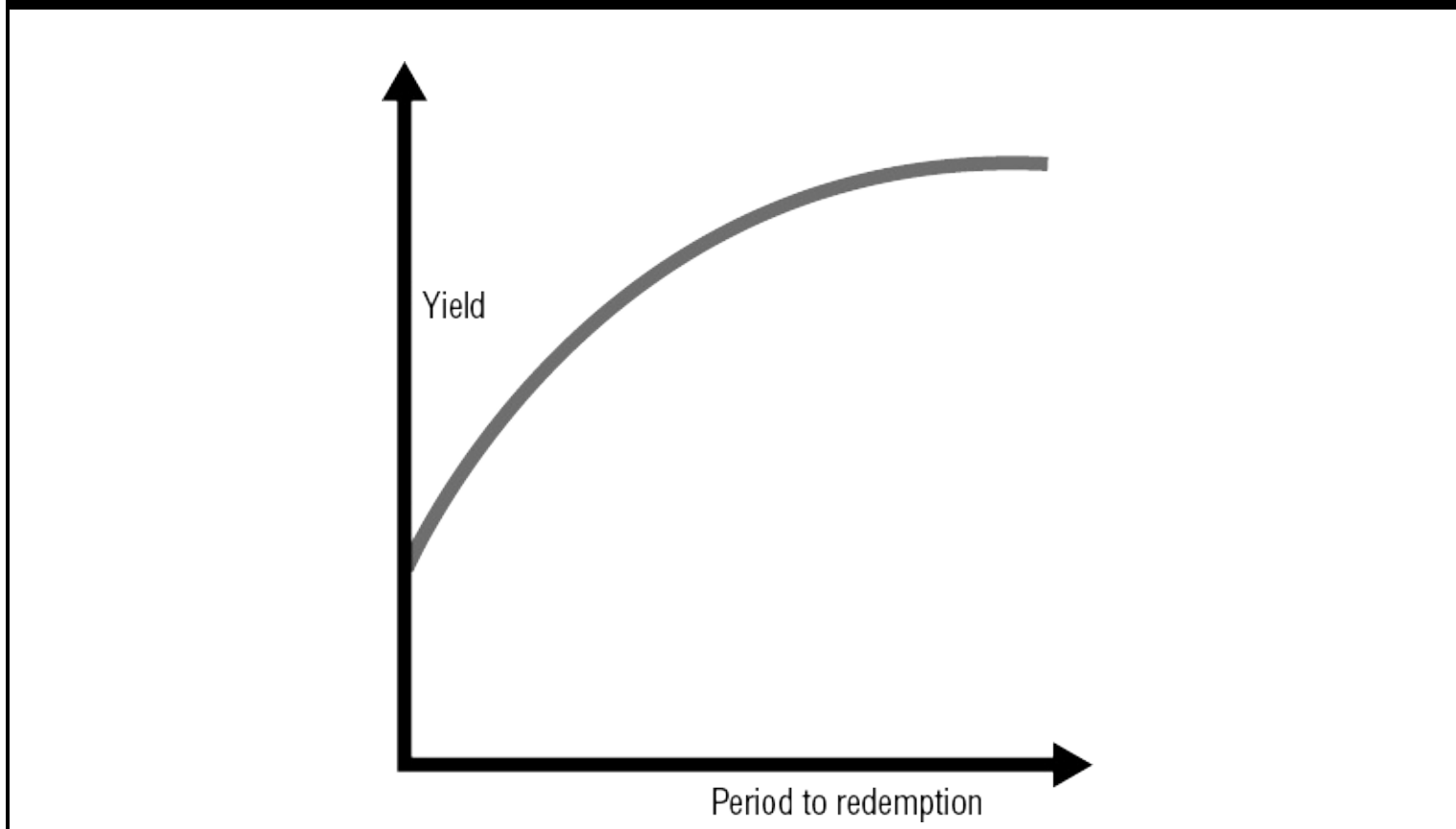
B6A Normal yield curve

In normal circumstances, investors demand higher yields for holding longer-term bonds to cover the

increased uncertainties over time. The yield curve is then a rising positive curve.

- The higher the degree of pessimism over future inflation and interest rates the more steeply the yield curve will rise, as investors will want to ensure that they are getting a higher yield to compensate. They will want to pay less for the fixed return on longer-dated bonds.
- For investors who are seeking an income, a positive yield curve means that it will require more capital to achieve the same income in short-dated bonds than in longer-dated bonds.

Figure 1.5: Normal yield curve

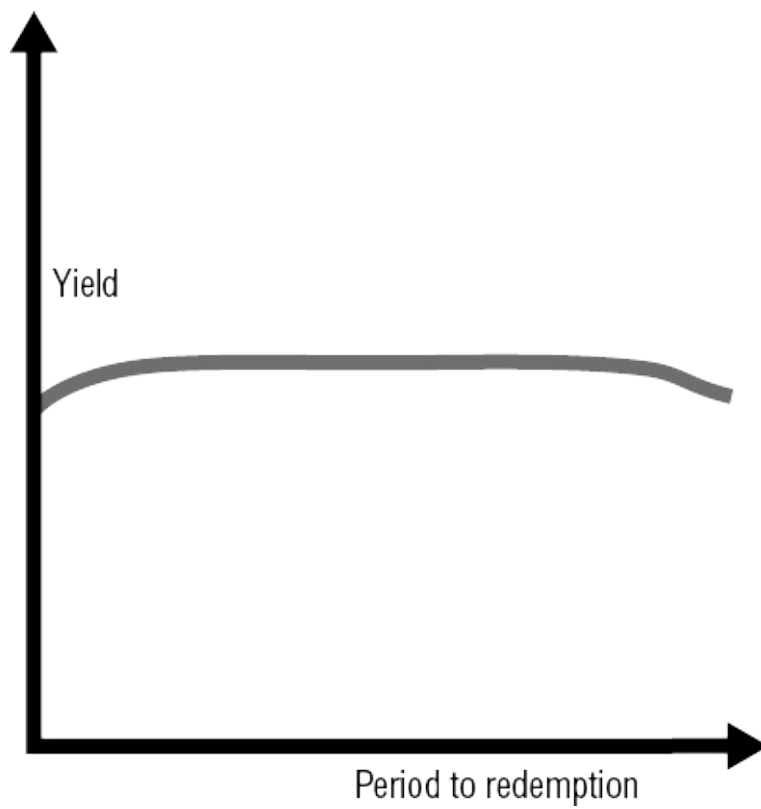


B6B Flat yield curve

When economic factors are deemed to be particularly stable and no radical changes to inflation and interest rates are expected, the yield curve can become almost flat. Investors are prepared to accept a lower yield and pay relatively more for longer-dated bonds. They can buy income at almost any redemption period for much the same price, with no significant penalty for switching from longer-dated bonds to shorter, lower risk bonds.

Figure 1.6: Flat yield curve

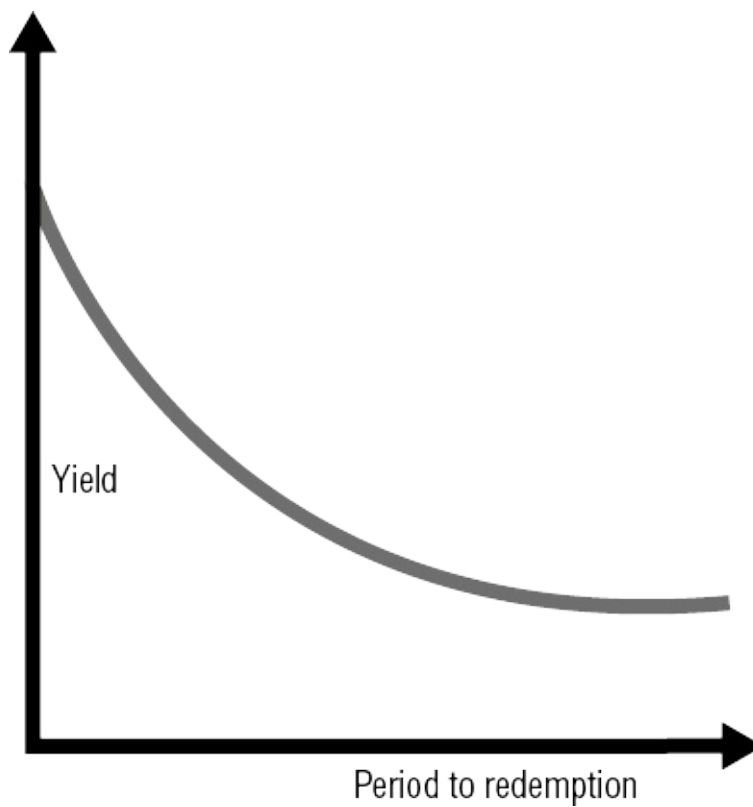




B6C Inverted or reverse yield curve

Occasionally the yield curve can invert, so that the yield on longer-term bonds is less than on short-term bonds. This can be caused by investor expectations that interest rates will rise in the short term while long-term interest rates are expected to be substantially below current levels. It can also be a result of factors connected with supply and demand that reduce the yield on longer-dated bonds.

Figure 1.7: Inverted yield curve



The Bank of England estimates yield curves for the UK on a daily basis.

B7 Gilts

Gilts are fixed-interest securities issued by the UK Government (via the DMO) when it needs to borrow money because it has insufficient income to meet its expenditure.

The term 'gilts' is short for gilt-edged stock, a name given to UK Government securities because when they were first printed on gilt-edged, or gold-edged, paper. They are generally regarded as risk free, since they are guaranteed by the UK Government.

B7A Categories of gilts

Gilts are classified, according to their **time to redemption**, into shorts, mediums and longs. The financial press and the DMO differ in respect of their categorisations, as per the table below:

Category	DMO definition	Financial press definition
Shorts	Less than seven years	Less than five years
Mediums	Between seven and fifteen years	Between five and fifteen years
Longs	Over fifteen years	Over fifteen years

The classifications reflect the current life of the bond, rather than the period to redemption when the gilt was issued; they get reclassified as their date of maturity draws closer. In addition to conventional gilts, there are also index-linked gilts.

B7B Index-linked gilts

An index-linked gilt differs from a conventional gilt in that the coupon payments and capital repayment are adjusted in line with inflation, as measured by the RPI, since the gilt was first issued. Those issued before September 2005 use RPI eight months before each payment date, while all index-linked gilts issued from September 2005 use RPI three months before each payment date.



How it works

Inflation protection

Investors are protected against the value of their investments being eroded by inflation:

- both interest payments are revised in line with changes in the RPI; and
- capital repayment on redemption reflects changes in RPI from the date of issue to the date of redemption.

However, if the RPI falls, then the interest and capital payments will also fall.

The coupons and yields on index-linked gilts tend to be much lower than on conventional bonds, although the income will rise in the future in line with inflation.

Redemption yields for index-linked gilts cannot be calculated in the usual way, as the interest and redemption values are not fixed. Estimates of redemption yields are currently quoted in the financial press assuming a 3% inflation rate. The DMO website has a report which allows you to estimate redemption payments using different inflation rate assumptions.

Any profits on disposals of index-linked gilts are exempt from capital gains tax (CGT), including any gain resulting from the inflation uplift of the capital amount. The full amount of interest received will, however, be taxable, including any inflation uplift.

B7C Repo market

The term 'repo' is short for **sale and repurchase agreement**. In a repo agreement, one party agrees to sell gilts to another party with a formal agreement to repurchase equivalent securities at an agreed price on a specified future date.



Repos

Repos usually have the following characteristics:

- The price differential between the sale and repurchase price reflects the interest cost of raising the funds. The longer the term of the loan, the higher the repurchase cost to reflect a greater interest cost.
- Although legally a repo involves a transfer of the assets involved, in practice it often operates as a form of short-term lending, with the gilts being used as security for the loan.
- Since the seller is arranging a short-term loan with gilts as security, the interest rate is competitive. The seller continues to gain exposure to the gilt market and has raised finance on a temporary basis without the costs of buying and selling the gilts.

- If the original owner does not repurchase their stock on the pre-set date at the pre-set price, the repurchase transaction is not fulfilled. The stock then becomes the property of the lender and they can sell it to release their cash.
- The buyback period is usually two weeks, but it can range from overnight to several months.

In practice, the Bank of England uses the repo market to influence interest rates.

B7D Strips market

Strips is the acronym for Separate Trading of Registered Interest and Principal Securities. Stripping is the process of separating a conventional interest-bearing gilt into its individual interest (coupon) and redemption payments, which can then be separately held and traded in their own right.



Example 1.4

A ten-year gilt can be stripped to make 21 separate securities:

- 20 strips based on the coupons, which are entitled to just one of the half-yearly interest payments; and
- one strip entitled to the redemption payment at the end of the ten years.

There are two series of strippable gilts; the first pays coupons on 7 June and 7 December, and the second series pays coupons on 7 March and 7 September.

Strips are referred to as zero coupon instruments, since they pay no regular, half yearly interest:

- investors receive a payment of the strip's face value when they mature; and
- before maturity they trade at a discount to their face value.

B8 Corporate fixed-interest securities

Companies as well as governments often want to borrow money at fixed rates of interest for long periods of time. Just like a government, companies can issue fixed-interest securities. Corporate fixed-interest securities are referred to as **corporate bonds**.



Corporate bonds compared with gilts

Note that:

- The risk attached to corporate bonds is greater than that attached to gilts.
- Prices are typically more volatile than gilts.
- Corporate bonds issued by the largest companies can be bought and sold easily, but lower quality bonds may be difficult to trade, particularly in a crisis. The market is generally less liquid in a crisis, as there are often fewer investors, and it may not always be possible to trade.
- The spread between the buying and selling price is wider than for gilts.
- The creditworthiness of companies is constantly changing, unlike that of the government. Consequently, corporate bond prices can vary, even though interest rates and inflation are stable.
- Yields on corporate bonds are generally higher than gilts, reflecting their increased credit risk and lower liquidity.

B8A Types of corporate bond

Corporate bonds may be secured or unsecured, and companies may issue both kinds.

- When the loan is **secured**, there is a charge on certain assets of the issuing company. If the company falls into arrears with its interest payments, or defaults on its capital repayment, the assets can be seized and could ultimately be sold to repay the loan.
- When the loan is **unsecured**, the holder will rank for repayment alongside the ordinary creditors of the company. All secured loans rank for payment before unsecured loans in the event of the company being wound up.

For the protection of the bondholders, the terms of the issue usually contain certain conditions or restrictive covenants:

- there might be an upper limit on the total amount of money the company could borrow; or
- the company might have to stay within certain financial ratios. These could be a maximum on total debt in relation to shareholders' funds, or company profitability compared with interest payments.

There is no obligation for a company to provide security for a loan; however, an unsecured loan will usually be more expensive for the issuing company than a secured loan. The yield will have to be higher to attract investors.

B8B Debentures

The term **debenture** technically means a written acknowledgement of a debt. For investments it tends to be applied to bonds where there is some specific security or charge over assets in favour of the lender.

Debentures are established by trust deed, and usually corporate trustees are appointed to act on behalf of the lender and ensure that the borrower adheres to the provisions of the deed. The trust deed will include:

- terms of the issue – the interest rate, payment dates and redemption date;
- assets backing the bond;
- powers of the trustees; and
- any conditions imposed on the borrower, such as restricting the total amount of money the company can borrow, by imposing a maximum ratio of debt to share capital.

Debentures can be secured by one or both of the following:

- a fixed charge; or
- a floating charge.

Table 1.10: Fixed and floating charges

Fixed charge	<p>A fixed charge is a charge over a specified asset or assets of the company:</p> <ul style="list-style-type: none"> • these typically include land or freehold property that can be readily identified and should not depreciate in value over the term of the loan; and • the fixed-charge assets cannot be sold by the company without the consent of the debenture holder.
Floating charge	<p>A floating charge is a general charge over any of the assets of the company that are not otherwise secured in favour of other lenders or banks.</p>

- The company can freely dispose of floating charge assets in the usual course of its business, but if it defaults on the loan the assets are available to be sold to repay the debenture holder.
- A debenture with a floating charge has a lower priority for payment than a debenture with a fixed charge if the company is wound up.



Consider this...

Which would you prefer, as a lender, a fixed or a floating charge?

B9 Convertible bonds

Convertible bonds are usually unsecured loan stock that offers the holder the option of converting the bond into the ordinary shares of the issuing company under specified terms and conditions.

Table 1.11: Characteristics of convertible bonds

- Interest is payable in the usual way until the option is exercised, although they usually carry a lower coupon than straightforward loans because of the right of conversion into ordinary shares at some future date. The low interest rate is compensated for by the opportunity of a favourable return on conversion.
- Conversion rights can vary considerably between different convertible bonds. Some have a short conversion period, such as one month, in each of a number of consecutive years, while others have a specified date on which the conversion option may be exercised.
- The number of shares the holder will receive may also differ between issues. The number may be fixed throughout the entire conversion period, or may reduce towards the end of the period.
- If the conversion does not take place by the expiry date, the bond will revert to a conventional dated bond, although the company usually retains a right to redeem any stock outstanding once a certain percentage has been converted.

The following example shows the basic calculation that is undertaken to determine whether it is worth converting.



Example 1.5

Conversion terms

A company has issued a 5% convertible unsecured bond at £100 nominal. This can be converted into the company's ordinary shares at a rate of 25 ordinary shares for every £100 nominal of the bond. At each conversion opportunity, the investor will review whether it is worth exercising the option to convert. This is assessed by comparing the respective values of the bond and the shares. Let's assume that the bond is trading at £110 to yield 4.5% and that the ordinary shares are priced at 400p:

Holding	Nominal	Price	Market value
Convertible bond	100	£1.10	£110
Ordinary shares	25	£4.00	£100

In this example, the investor would not exercise their right to convert as it is clearly unattractive. If the share price were to rise, however, to say 450p then it may be worth converting:

Holding	Nominal	Price	Market value
Convertible bond	100	£1.10	£110.00
Ordinary shares	25	£4.50	£112.50

When considering whether to convert into shares, an investor would also look at the effect that conversion would have on the income received.

Convertibles fluctuate in value and often reflect the issuing company's share price:

- a rise in the company's share price may cause the convertible bond to rise as well; and
- a fall in the company's share price could mean that the convertible bond is not worth converting, but the price should never be less than an otherwise identical straight bond.



CGT

Bonds that can be converted into shares do not qualify for exemption from CGT. Any gains on disposals are chargeable to CGT and losses can be set against other taxable gains.

B10 Floating rate notes (FRNs)

Floating rate notes (FRNs) are securities issued by companies, particularly banks and other financial groups, which pay a rate of interest that is linked to some relevant money market rate, such as LIBOR.



Coupons

For example:

- The interest rate on FRNs is usually set by reference to the average of LIBOR over a six-month period and expressed as so many basis points (hundredths of one percentage point) above LIBOR, e.g. LIBOR plus 50 basis points would be an additional 0.5%.
- The coupon is usually paid half-yearly or quarterly and the rate for each coupon is determined at the beginning of each coupon period.

- The price of a FRN is likely to stay quite close to its nominal value:
 - changes in interest rates will not cause the market price to alter in the same way as a fixed-interest security, as it is the interest rate on the security itself that will change;
 - the market price is however likely to alter if the creditworthiness of the issuing company changes.

B11 Permanent interest bearing shares (PIBS) and perpetual subordinated bonds (PSBs)

Permanent interest bearing shares (PIBS) are a type of fixed-interest investment issued by building

societies, which are listed and traded on the Stock Exchange.

Perpetual subordinated bonds (PSBs) were originally issued as PIBS by building societies that have now converted to banks.

Table 1.12: Features of PIBs and PSBs

They both have the following features:

- The issuer has no obligation to redeem them. The only way investors can realise their investment is by selling the PIBS to another investor.
- They are undated stocks, although a number of issues are callable between now and 2030. This gives the issuer the right to call or redeem them at par (£100) on or after a specified date in the future.
- Because they are long-term investments, their capital values are particularly sensitive to changes in interest rates.
- They do not qualify for compensation under the FSCS.
- They rank behind all depositors and other creditors in a liquidation.
- If interest payments are missed they are non-cumulative and will not be made up in later years. The building society/bank has the right to pass on interest payments if they are not adequately covered by earnings, or if interest is due on other shares or deposits.
- Minimum investment limits vary from £1,000 to as high as £50,000; however, the market is quite small and rather illiquid.
- The yield from PIBS is better than average to compensate investors for their lack of security.
- Interest on PIBS is paid half-yearly. It is paid gross, but is subject to income tax.
- PIBS are within the definition of 'qualifying corporate bonds' and are exempt from CGT.



Question 1.3

What is the best measure of a bond's performance?



Key points

The main ideas covered by this chapter can be summarised as follows:

Cash investments

- Cash deposits do not expose an investor's capital to investment risk. However, there is no potential for capital growth, which means that over time its real value will be eroded by inflation.
- Higher rates of interest may be offered on deposit accounts that restrict access, or impose penalties on withdrawals.
- Any restrictions will need to be taken into account when considering whether the account is appropriate for an investor.
- Bank and building society deposits are protected by the FSCS if an institution becomes insolvent.
- NS&I offers a range of products with both variable and fixed rates of interest, some of which are tax-free.

Fixed-interest securities

- Fixed-interest securities can provide a secure income.
- If sold before redemption their value can go down as well as up.
- Many factors can affect their price.
- Specific or commercial risk relates to the creditworthiness of the issuer and the possibility of default.
- Market or systematic risk relates to the possibility of changes in interest rates and inflation, and any anticipated future movements.
- Gilts are guaranteed by the UK Government and are free of default risk.
- Companies issue corporate bonds with differing levels of security.



Question answers

1.1 False. Although cash investments always produce total returns in excess of the amount invested, that is, a positive return in nominal terms, they are not free of risk. Investors can find that the purchasing power of their cash (its 'real' value) has declined over the period of investment due to inflation. There is also the default risk that the funds deposited are not returned.

1.2 The interest yield would be:

$$\frac{5}{120.1} \times 100 = 4.16\%$$

1.3 The redemption yield is the most useful measure of a bond's performance, because it reflects the returns from both the interest and final redemption payments.



Self-test questions

1.	What are the two main characteristics of cash deposits?
2.	What is the maximum compensation payable under the Financial Services Compensation Scheme (FSCS) to cash depositors?
3.	What are the two main types of restricted access deposit accounts?
4.	What does the term 'negotiable' mean when referring to fixed-interest securities as negotiable securities?
5.	What does the nominal or par value of a gilt determine?
6.	What does the interest or running yield measure and what is the formula?
7.	Which are more volatile: bonds with long periods to maturity and low coupons or those that are short-dated with high coupons?
8.	What is a reverse yield curve and how does it differ from a normal yield curve?
9.	Do corporate bonds generally offer higher or lower yields than gilts? Explain why.

You will find the answers at the back of the book

1.2: Equities, property and alternative investments

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Learning objectives

After studying this chapter, you should be able to:

- analyse the different categories of shares, their characteristics, risks and returns, valuation methods and stock markets;
- analyse the main types of property investment, their characteristics and risks and the costs of investing; and
- describe the characteristics and risks of alternative investments such as works of art and commodities.



Key terms

This chapter features explanations of the following ideas:

AIM	Alternative investments	Buy-to-let mortgages	Commercial property
Commission	Commodities	Dividend cover	Dividend yield
Earnings per share (EPS)	Indices	London Stock Exchange	Net asset value (NAV)
Overseas indices	Panel on Takeovers and Mergers (PTM) levy	Preference shares	Price earnings (P/E) ratio
Primary market	Private equity	Property	Rental yields
Rent-a-room relief	Secondary market	Stamp duty	Stamp duty land tax (SDLT) thresholds

C Equities

An equity represents a part ownership of a company's capital and is an alternative name for an ordinary share. Investors buy shares in a company because they expect to receive income in the form of dividends, and to achieve capital growth. They hope that rising company profits will lead to increasing dividends and/or growth in the value of the shares.

Every company issues shares, but for shares to be offered to the general public the company must usually gain a listing on a Stock Exchange.

- When a company is quoted on the stock market, it means that a price for its shares is published and it is usually possible to buy and sell them quickly and easily; and
- Many companies, especially very small companies, are not quoted on a stock market, and it is generally very difficult to buy and sell their shares or even establish what they are worth.

C1 Factors that affect share prices

The forces of supply and demand are the main influence on share prices as follows:

- In the long term, fundamental economic and political factors cause movements in the market as a whole.
- In the short term, market movements can be affected by investor sentiment.
- The price movement of individual shares is influenced by a range of factors specific to that business.

Table 1.13 looks at these points in more detail:

Table 1.13: Factors affecting share prices

External economic and political factors	<ul style="list-style-type: none"> • The market is affected by changes in the pattern of economic activity and in particular by changes in inflation, productivity, growth and in the government's fiscal and monetary stance. • Such changes do not affect all companies to the same degree, and can have a different impact on companies in different sectors. • For example, a rise in interest rates may depress the price of shares in house building companies more than the average, because higher mortgage costs could deter house buyers.
Investor sentiment	<ul style="list-style-type: none"> • Investors may be optimistic or pessimistic about a particular company, sector or market. If investors become enthusiastic about a particular company or sector and buy its shares, the price will rise. This in turn may attract other investors to buy, so moving the price still further. The process becomes self-fuelling. • Investors on the London Stock Market are also influenced by the performance of shares in overseas markets, particularly the USA. However, with increasing globalisation this influence may be more than just sentiment, as world economic events can affect all markets.
Profit expectations	<ul style="list-style-type: none"> • There may be expectations that a company's profits will either grow or decline. Investors usually take into account long-term trends, and the current share price may reflect their views of how well the company is expected to perform for some time into the future. • When a company realises that its profits are going to be significantly lower than it had forecast, it will usually have to give advance warning to investors through the Stock Exchange. When profit warnings are unexpected, the share price tends to fall heavily.
Dividend expectations	<ul style="list-style-type: none"> • A company may increase or reduce dividends, since the amount paid is at the discretion of the directors of the company. Dividends usually follow the same trend as the profits, but they can sometimes rise faster or more slowly. • Investors prefer a steady growth in dividends, and an unexpected reduction is likely to lead to a significant fall in the price of the company's shares.
Takeover activity	<ul style="list-style-type: none"> • A company may be considered a takeover target, which could boost the share price, at least in the short term.
The quality and track record of management	<ul style="list-style-type: none"> • The quality of a company's management is a difficult factor to assess and evaluate. • The ability of management to recognise changing circumstances and to respond by taking steps to adapt accordingly, will usually be considered to be a positive factor by investors. • The past record of the management is usually fully taken into account in the price of the company's shares. However, the appointment or departure of an influential member of management may cause an immediate change in the share price.

C2 Dealing in shares

Dealing in shares in the UK takes place on the **London Stock Exchange**, or other recognised investment exchanges, which serves as both a primary and a secondary market for investors.



Primary and secondary markets

Primary market: one in which securities may be sold for the first time to investors, to raise money for businesses.

Secondary market: a market in which securities that have already been issued can be bought and sold between investors.

The buying and selling in the secondary market does not directly affect the finances of the companies whose shares are traded, but if investors were not able to buy and sell shares in the secondary market they might be reluctant to invest in companies by buying securities in the primary market when they were first issued.

When shares are first issued on the London Stock Exchange they must be either admitted to the:

- Official List or main market; or
- Alternative Investment Market (AIM).

Table 1.14: London Stock Exchange	
The official list or main market	<ul style="list-style-type: none"> • Companies that are admitted or listed on the London Stock Exchange make up the main market. • Becoming listed, or ‘going public’ as it is commonly termed, is a demanding and expensive process. The process of floating companies is regulated by the United Kingdom Listing Authority (UKLA), which is part of the Financial Conduct Authority (FCA). • The UKLA aims to provide a stable and orderly market. Its requirements govern the ongoing behaviour of listed companies and the way in which they report to their shareholders.
AIM	<ul style="list-style-type: none"> • The London Stock Exchange launched the Alternative Investment Market (AIM) in June 1995 to provide primary and secondary market facilities for companies either too small or too new to apply for a full stock market listing. The AIM can also be used as an interim stage to a full listing. • Although the AIM is properly regulated by the London Stock Exchange, it has less onerous listing requirements than the main market, with fewer formalities and lower costs. The objective is to provide wider accessibility for young and developing companies that are seeking to sell shares, while maintaining a regulated and orderly market. • The shares of AIM companies may be described as being quoted or traded on the market, but as AIM companies do not fall within the definition of companies listed on a recognised stock exchange, their shares should not be described as listed.

C2A Costs of buying and selling shares

Shares can be bought and sold through stockbrokers. Investors can either approach a broker directly or they can deal through a bank or building society, which either owns or has links with a stockbroker. The costs involved in buying and selling are:

- commission;
- stamp duty reserve tax (SDRT); and
- Panel on Takeovers and Mergers (PTM) levy.

There will also be a difference between the offer price, at which an investor can buy shares, and the bid price, at which they can be sold. This spread is the basis of the market maker’s profit and is likely to vary depending on the shares being traded and market conditions.

Larger company shares that are heavily traded on the market will have quite narrow spreads. The spread on smaller company shares will be wider, reflecting their reduced liquidity and the smaller number of market makers prepared to quote a price.

Commission

Commission is the charge made by the stockbroker for executing the deal. There are no rules governing commission rates, and it is a commercial decision for firms to set their own charges.

Commission is charged on both purchases and sales at the same rate. The level of commission will be either a flat fee (possibly going up in stages according to the size of the deal), or a percentage based on the size of the deal. Charges of traditional stockbrokers are usually tiered.



Example 1.6

A typical rate for a stockbroker might be:

- 1.25% on the first £10,000;
- 0.25% on the excess over £10,000; and
- a minimum charge of £20 to £30.

Commission charges are usually lower for deals placed online.

Stamp duty/stamp duty reserve tax

Stamp duty (SD) and **stamp duty reserve tax (SDRT)** are Government taxes charged on the transfer of UK-registered shares (although not on shares in companies quoted on recognised growth markets such as AIM). SD is charged if the transfer is effected by a stock transfer form, and SDRT is charged on paperless share transactions effected through CREST. The rate of tax is 0.5% of the purchase price. They operate as follows:

- SD and SDRT are paid by the purchaser, not by the seller;
- SD is rounded up to the next multiple of £5; and
- SDRT is rounded to the nearest penny.

Panel on Takeovers and Mergers (PTM) levy

The panel on takeovers and mergers (PTM) levy is a flat rate charge of £1 that is applied to all trades of £10,000 or more to generate income for the PTM. The panel is the regulatory body that oversees all takeovers and mergers of companies listed on the London Stock Exchange.

C3 Types of shares

There are two main classes of share capital: ordinary shares and preference shares, although there are a number of variations on these that companies may issue. They differ from each other in respect of the rights their holders have in these three areas:

- receipt of dividends;
- control of the company; and
- return of capital if the company is liquidated.

C3A Preference shares

The following features apply to preference shares:

- Preference shares usually pay a fixed rate of dividend half-yearly, and in this respect are similar to

loan stock. However, the dividend is only paid if there are sufficient after-tax profits, whereas the interest on loan stock must be paid, whether the company has made a profit or not.

- The payment of dividends on preference shares has priority over the payment of dividends on ordinary shares, but comes after all the interest payments on debt have been made.
- They generally have no voting rights, unless the payment of dividends has fallen into arrears.
- In a liquidation they rank ahead of ordinary share capital, but after loan capital and all other creditors.
- Since the security of preference shares is lower than that for bonds, their yields are higher to compensate for the risks involved.

Different types of preference shares

There are a number of different types of preference share. When a company has issued more than one type they may either rank them in a certain order, with one type having priority over another issue, or on an equal basis.

The ranking usually relates to their priority for the payment of dividends and entitlement to capital on winding-up.

Cumulative preference shares	<ul style="list-style-type: none"> • Preference shares can be either cumulative or non-cumulative. Unless specifically stated otherwise, they are cumulative. • This means that if the company has insufficient profits in one year to pay the cumulative preference share dividend, the shortfall must be carried forward. It must be paid before other shareholders of a lower class can receive any payment. • Even if a cumulative preference share is many years in arrears, all arrears must be paid before a dividend can be declared on the ordinary shares.
Non-cumulative preference shares	<ul style="list-style-type: none"> • Non-cumulative preference shares lose the right to receive any unpaid dividend at the end of the financial year, and no arrears are due when dividend payments resume.
Participating preference shares	<ul style="list-style-type: none"> • Participating preference shares pay a fixed rate of dividend and also allow the holder to participate in the profits of the company. • They receive an additional dividend that is usually a proportion of any ordinary dividend declared.
Redeemable preference shares	<ul style="list-style-type: none"> • They represent a temporary source of finance for the company. • Dividends will be paid to the shareholder for a short period and they will then be repaid. • Most preference shares are undated, but some are redeemable at a pre-determined date or at the option of the company.
Convertible preference shares	<ul style="list-style-type: none"> • Convertible preference shares carry the right to be converted, at the holder's option, into ordinary shares at pre-set dates and on pre-set terms. Their prices respond to both the fixed payment and the convertible element. • If the ordinary shares increase in value and it becomes likely that the conversion rights will be taken up, then the convertible preference share will track the ordinary share price.

C3B Ordinary shares

Ordinary shares usually form the bulk of the share capital of a company and confer an ownership stake in the company. They represent the risk capital of the company and are the last to be paid out in the event of liquidation. Holders of such shares have a right to share in the profits of the company – dividends – and a right to attend and vote at company meetings.

While most companies only have one class of share, it is possible to create additional classes with different rights.

Rights

- The ordinary shareholders are generally entitled to all of the profits that remain after tax and preference share dividends have been paid. Usually not all of the profits are paid out in the form of dividends. Profits retained by the company will increase its value, so generating capital growth in the value of the shares.
- Ordinary shareholders are entitled to attend and to vote at general meetings of the company giving them, among other things, the right to elect the directors who will control the business on a day-to-day basis. Usually one ordinary share carries one vote, giving shareholders with a high proportion of the shares more influence.
- If the company is liquidated, the ordinary shareholders are entitled to share the residual value of the company's assets after all debts have been discharged and other shareholders have received what they are entitled to.
- The holders of the ordinary share capital bear the greatest risks and should therefore receive a higher rate of return than that accruing to more secure forms of investment.

Dividends

Dividends can only be paid out of the profits that a company has made and it is up to the board of directors to determine whether a dividend will be paid and the amount.

Dividends are paid out of profits that have already suffered corporation tax. The tax treatment for investors is then as follows:

- Investors do not pay any tax on the first £5,000 of dividends received in a tax year.
- Above this dividend allowance, the tax paid depends on the income tax band of the investor.

Tax band	Tax rate on dividends over £5,000
Basic rate (and non-taxpayers)	7.5%
Higher rate	32.5%
Additional rate	38.1%



Be aware

The legislation to reduce the tax-free dividend allowance from £5,000 to £2,000 with effect from 6 April 2018 – as announced in the Spring Budget – was withdrawn from the Finance Bill 2017 before it was enacted as the Finance Act 2017 on the 27 April.

You should keep abreast of developments in this respect because the previous Conservative government announced that it still intended to introduce the change at the earliest opportunity if it was re-elected. At the time of publication, it is unclear if this will happen.

Other types of ordinary shares

While most companies only have one class of share, it is possible to create additional classes with different rights. These are shown in Table 1.16.

Non-voting ordinary shares	<ul style="list-style-type: none">• These shares are identical in all respects to ordinary shares, except that they carry restricted or no voting rights.• They are usually called 'A' ordinary shares. They were originally devised to keep the control of a company in the hands of a few shareholders, while raising capital from general investors.• Where these shares still exist, they offer no greater return (they receive the same ordinary dividend) although the shareholders are exposed to a higher risk since they cannot influence the operation of the company. As a result, their market price is usually lower than that of the voting ordinary shares.
Deferred ordinary shares	<ul style="list-style-type: none">• Deferred ordinary shareholders do not usually qualify for a dividend until the dividend on the ordinary shares has reached a pre-determined level, or until a specific period after their issue.• To compensate for this deferral, the shareholders may have greater voting rights, or become entitled to a larger proportion of the profits after the deferred period.• Deferred ordinary shares are relatively uncommon today.

C3C Risks

Shares are relatively high risk. The main risks associated with holding shares are shown below.

Equity capital risks	<ul style="list-style-type: none">• The share price depends on supply and demand.• Investors try to use past performance, immediate and potential future events to assess the value of a share. If a company performs badly by producing lower profits than expected, the chances are that its share price will suffer as a result.• The causes of poor performance could be based on specific circumstances of the business, such as poor management.• Alternatively, there could be market risks beyond the company's control, at least in the short term. For example:<ul style="list-style-type: none">◦ The state of the economy generally or technological change can affect investor perceptions of share values.◦ Geopolitical events such as wars and their aftermath can have a very significant impact on share values.◦ Markets and shares can be the victims or beneficiaries of fashion. High technology companies have been both in recent years.
Share dividend volatility	<ul style="list-style-type: none">• Dividends from shares can fluctuate as companies alter their dividend payout to shareholders. The trend has generally been upwards.
Currency risk	<ul style="list-style-type: none">• Any investment in cash, bonds, property or equities that is denominated in another currency is subject to currency risk.• Investors usually measure returns in terms of the currency they use and in which they have main assets and liabilities, e.g. a US citizen thinks in terms of US dollars and a German thinks in terms of euros.• Investing outside the UK involves a risk that the chosen currency will fluctuate in relation to sterling, which increases the overall investment risk in sterling terms.

	<ul style="list-style-type: none"> • An individual who moves from one currency area to another on a regular basis (e.g. a UK resident who has a holiday home in Spain, or who is intending to buy one), might find it worth holding deposits in the relevant foreign currencies.
Liquidity risk	<ul style="list-style-type: none"> • Investors need to be aware of the potential inability to realise their investments. • Some types of investments cannot be quickly converted to cash, may have provisions to block redemption (e.g. notice periods), or have penalties for early encashment. • This applies to a wide range of investments from fixed-term cash deposits to some collective investments. • Property funds in particular are prone to redemption blocks or deferred redemptions when investors may have to wait 6–12 months before accessing their funds.
Counterparty risk	<ul style="list-style-type: none"> • This is the risk that the organisation with which an investment is placed will fail. • Counterparty risk comes in different forms and has been a major issue for some time, as the FCA now looks at how to better protect consumers and to firms to improve their disclosure of the potential risk to investors. • The activity in the exchange traded funds (ETF) sector in 2011 to better disclose counterparty risk for synthetic ETFs and stock lending risk for traditional ETFs is an example of this. • The most pertinent example of counterparty risk is the collapse of Lehman Brothers in 2008 which we will look at in more detail in chapter 6. • Credit ratings and compensation schemes provide some comfort but counterparty risk remains one of the most difficult to judge.
Fund managers and insurance companies	<ul style="list-style-type: none"> • The structures and legislation governing fund management companies and insurance companies should greatly reduce the risks of investing through these institutions, but events such as the demise of Equitable Life, suggest that advisers cannot completely ignore this risk. • The Financial Services Compensation Scheme (FSCS) provides protection up to a maximum of £50,000 for investments, 90% of the claim for most general insurances, and 100% of the claim for compulsory and long-term insurances.
Regulatory risk	<ul style="list-style-type: none"> • The inadequate regulation of investment markets and commercial life generally can pose considerable risks to the value of investments. • Regulatory risk can cover a range of possibilities and is likely to be prevalent in countries where government authorities have a more tenuous control over the markets than in more advanced economies. Regulatory risk is therefore greater in developing or emerging markets, but is by no means confined to them. • Regulatory risks include: <ul style="list-style-type: none"> ◦ Investors being misled about companies' assets, liabilities, turnover and profitability. In countries where accounting standards are relatively poor, this might be expected, but it can happen in advanced countries, as the Madoff Fund scandal and the Enron (US) and Parmalat (Italy) affairs have previously demonstrated. ◦ Inefficient market mechanisms leading to difficulties in dealing or establishing good title to the ownership of securities. Buying and selling shares can be an expensive and uncertain process in some emerging markets. ◦ Market manipulation so that the price of securities can be artificially boosted or depressed – generally for the benefit of a few shareholders.

C3D Equity diversification

The risks associated with equities are substantial. Diversification can be used to reduce the level of risk an investor is exposed to.

- **Diversifying from individual shares**

By diversifying over a range of shares in different sectors of the market, the investor reduces the risk of poor or even catastrophic performance by one share. What could be a catastrophe for one company may be a windfall for another. For example, a jump in crude oil prices may be bad news for aviation companies, but it would be good for oil exploration businesses.

- **Diversifying across sectors**

Diversification should also be across sectors to reduce non-systematic risk. For example, a portfolio consisting only of bank shares will offer little protection if bad debt levels rise generally or the government decides to impose a windfall tax on financial institutions.

- **Diversifying across international markets**

The next stage up from diversification across different market sectors is diversification across international equity markets. This has a number of potential risk-reducing advantages, e.g:

- Not all the world's stock markets move in unison.
- Different markets give investors access to companies operating in sectors that are unavailable in their home market. For example, a UK investor who wants exposure to car production has to look to Europe, Japan or the USA for companies in which to invest.

To a growing extent **globalisation** may have reduced the benefits of international diversification. Some institutional investors now view multi-national companies as a sector in their own right, regardless of where each company is listed (and listings may be on more than one market). Many of the FTSE 100's constituents make most of their profits outside the UK. However, this is an increasingly narrow view as it is much easier for investors to get 'true' access to markets through ETFs.

C3E Past performance

It used to be generally stated that equities consistently outperform all other main asset types – bonds in particular – and have delivered superior real returns over the long term. It must be remembered though that the past performance of assets is not necessarily what the performance will be in future. Past performance of assets should therefore be used for information purposes only.

During the 1990s, equities generally outperformed bonds, but this pattern changed in the 2000s.

C4 Private equity

Private equity is regarded as an asset class in its own right and involves either taking a stake in or acquiring companies that are not publicly traded on a stock exchange.

C4A Characteristics

Private equity involves providing medium to long-term finance in return for an equity stake in potentially high growth, unquoted companies. The term 'private equity' is typically used to refer to the provision of venture capital and management buy-outs and buy-ins.

A private equity firm is looking for its investment to be rewarded by the company's success and will generally seek to realise its capital gain through an 'exit', which may involve:

- selling its shares back to the management;

- selling the shares to another investor such as another private equity firm;
- a trade sale, which is the sale of company shares to another company; or
- the company achieving a stock market listing.

An investment in this asset class can be achieved through private equity funds and listed private equity investment companies as well as through enterprise investment scheme (EIS), seed enterprise investment scheme (SEIS) and venture capital trusts (VCTs). These will be covered in more detail in chapter 6.

Table 1.18: Private equity

Private equity funds	<ul style="list-style-type: none"> • Most UK private equity funds seek to raise money for investment from institutional investors, such as pension funds and insurance companies. • The funds will typically look to retain their investment in the companies that they invest in for between three and seven years, and many are structured as limited partnerships and usually have a fixed life of ten years. • Within this period the funds invest the money committed to them and aim to return the investors' original money plus any additional returns made. This generally requires the investments to be sold, or to be converted to quoted shares, before the fund is closed. • Although private equity funds target institutional investors, retail investors can gain access to them by using a fund of funds, such as a listed private equity company.
Listed private equity investment companies	<ul style="list-style-type: none"> • There are two types of private equity investment companies, those that invest directly in unlisted companies and those that invest in funds that invest in unlisted companies (funds of funds). • Some invest in both direct investments and funds, offering a hybrid of the two approaches. • Listed private equity investment companies are a form of pooled investment where the investment company is established as a closed-ended vehicle and so is a form of investment trust. They are traded on the London Stock Exchange and are eligible for inclusion in stocks and shares individual savings account (ISAs).

C4B Returns

Companies backed by private equity have been shown to grow faster than other types of companies as a result of the capital and experienced personal input provided by private equity firms.

The rationale behind investing in private equity should primarily be that superior returns can be generated. Reports suggest that returns from private equity have outperformed returns from publicly quoted shares by around 2% to 4%, but it is important to remember that they offer only limited diversification benefits.

C4C Risks

Private equity can deliver high returns, because companies generally grow fastest when they are young. But there is a high risk of losses, since some unlisted companies will fail and others will not grow quickly. Some unlisted companies are one-product firms, which makes them more vulnerable than more broadly based companies, and all are vulnerable to a domestic downturn or recession.

Where they have a stock market listing, private equity securities are less liquid than other listed securities: they can be sold less readily in large amounts, and the cost of transactions is higher. The majority of shares are often in private hands, which makes the share prices more volatile as trading

volumes can be very low.

C5 Investment ratios

Investment ratios are used by investors when deciding whether a share should be bought, sold or held. The factors that are of most concern to the average investor relate to the returns that they are receiving on their investment and the risks that they are facing. The use of percentages and ratios allows:

- trends in the company's performance over a number of years to be identified; and
- comparisons to be made with similar companies and/or with the industry's average.

Since most investment ratios relate to the current price of the shares, they will vary from day to day.

The following ratios are illustrated using the sample set of accounts for Green Trees plc, which are included as [appendix 1.1](#) to this chapter.

C5A Earnings per share (EPS)

Earnings per share (EPS) is generally regarded as an important consideration in investment decisions and is one of the most widely quoted statistics in relation to a company's performance since:

- all listed companies are required to publish EPS in their accounts; and
- EPS enables an investor to see the trend in a company's profitability.

Earnings per share is calculated as:

$$\frac{\text{Profit attributable to ordinary shareholders}}{\text{Number of ordinary shares in issue}}$$

The profit referred to here is the profit left after tax, minority interests and preference dividends have all been satisfied. This represents the profit available for distribution to the ordinary shareholders.

Companies generally retain some of their profits to fund future development and expansion, and do not usually pay out all of their earnings to shareholders as dividends.



Example 1.7
For Green Trees plc:

$$\text{EPS} = \frac{1,072 - 63}{5,000} = \frac{1,009}{5,000} = 20.18\text{p}$$

This represents the amount, in pence, that the company has earned during the year for each ordinary share.

C5B Dividend yield

The dividend yield measures the dividend as a percentage return on the current share price. It allows an

investor to compare the current return on a share with the return that could be obtained from bonds or deposits, or from an alternative share.

Dividend yield is calculated as:

$$\frac{\text{Dividend per share}}{\text{Current share price}} \times 100$$

For Green Trees plc it is first necessary to calculate the dividend per share. This is:

$$\frac{\text{Dividend}}{\text{Number of ordinary shares in issue}} = \frac{426}{5,000} = 8.52\text{p}$$

The dividend yield can then be calculated as follows:

$$\text{Dividend yield} = \frac{8.52}{200} \times 100 = 4.26\%$$

The dividend yield is a frequently quoted measure of return on a share, and is readily available in the financial press. It is however, dependent on a company's dividend policy and the current share price.

Notes

- Some companies distribute a smaller proportion of the profits that are available to ordinary shareholders, than others. Any retained earnings are not lost to shareholders because they will finance future profits and dividends.
- The yield will fluctuate with the share price, and can look attractive simply because the share price has slumped.
- It is not necessarily a reliable predictor of future income, as the level of dividend could change.



Question 1.4

If a company pays a dividend per share of 16.5p and the share price is 292p, what would the dividend yield be?

C5C Dividend cover

The dividend cover measures how many times the dividend could be paid out of the available current earnings. It indicates the riskiness of the investment and the margin of safety the company has in paying the dividend. Dividend cover can be calculated in two ways:

- On an **individual basis** as:

Earnings per share

Dividend per share

- On a **total profit basis** as:

$$\frac{\text{Profit attributable to ordinary shareholders}}{\text{Dividends paid to ordinary shareholders}}$$

Again the profit is that which is left after tax, minority interests and preference dividends have all been satisfied.



Example 1.8

For Green Trees plc:

- On an individual share basis:

$$\text{Dividend cover} = \frac{20.18}{8.52} = 2.37 \text{ times}$$

- On a total profit basis:

$$\text{Dividend cover} = \frac{1,072 - 63}{426} = \frac{1,009}{426} = 2.37 \text{ times}$$

Notes

- The higher the figure, the more likely it is that the company will be able to maintain the existing dividend if profits fall in the future.
- A relatively high dividend cover implies that the company is retaining the majority of its earnings for reinvestment in the business.
- A company may pay a larger dividend than it has available profits for the year. It would then draw on its reserves and is said to be paying an **uncovered dividend**, although this could not go on indefinitely.



Question 1.5

If a company has earnings per share of 58p and the dividend per share was 26p, what would the dividend cover be?

C5D Price earnings (P/E) ratio

The price earnings (P/E) ratio is based on the relationship between the share price and the earnings per share. It is a measure of how highly investors value the earnings of a company. It can be viewed as a reflection of the market's optimism or pessimism about the potential for future growth in earnings.

The price earnings ratio is calculated as:

$$\frac{\text{Current market price of share}}{\text{Earnings per share}}$$

**Example 1.9**

For Green Trees plc:

$$P/E = \frac{200}{20.18} = 9.9$$

Notes

- P/E ratios should only be used to compare companies in the same sector, rather than across the market and should be considered in relation to the average of the sector. Companies should only be compared with others in the same type of business, since ratios can vary considerably between industries.
- If a company's P/E ratio was higher than the average for an industry sector, it would suggest that the shares of that company were in great demand. The shares will be relatively more expensive, but investors would expect to be compensated by higher than average earnings in the future.
- A lower ratio than average would suggest that a company was not greatly favoured by investors, probably because it had poor growth prospects.
- In general, the higher a company's P/E ratio the more highly rated it is and the greater the expectations for growth. However, a share with a higher price earnings ratio is not automatically a better buy than a share with a lower ratio. The higher growth expectations may already have been taken into account in the share price, or it may just be that it is overpriced.

**Question 1.6**

What is the P/E ratio of a company if the share price is 410p and the earnings per share are 38.5p?

**Activity**

Look up the P/E ratios in a financial newspaper and compare the different ratios allocated to each company.

Compare the P/E ratios for companies in the retail sector. What conclusions can you draw?

C5E Net asset value (NAV)

The net asset value (NAV) of a company is the value for accounting purposes of the tangible assets that are attributable to the ordinary shareholders. It attempts to measure the amount available to shareholders if the company were to close down, sell all of its assets, pay all its bills, repay all of its borrowings and distribute the balance to the shareholders.

It is also known as the shareholders' funds or shareholders' interest in the company, and is effectively the capital provided by the shareholders plus all of the profits the company has retained in the business, rather than paying out as dividends.

The NAV per share is calculated as:

Net assets attributable to ordinary shareholders

Number of ordinary shares in issue

The net assets attributable to the ordinary shareholders are the total capital employed in the business minus prior claims, such as secured and unsecured loans and preference shares. This amount represents the minimum value that the shares would be worth.



Example 1.10

For Green Trees plc:

$$\text{NAV} = \frac{11,250 - (1,500 + 1,000)}{5,000} = \frac{8,750}{5,000} = \text{£}1.75$$

Notes

- This is the value for accounting purposes of the shareholders' interest in the company. However, it is unlikely that the assets would realise their balance sheet value if the company was liquidated.
- The NAV provides a useful guide to the price at which shares should trade for companies whose assets are generally readily realisable, such as property companies or investment trusts. However, the share price will be influenced by supply and demand for the shares.
- It is less useful for companies that are valued on their earnings potential, where the shares would generally trade above the NAV. This is because investors are willing to pay something for the goodwill inherent in the business.
- The NAV is a useful valuation figure in key circumstances:
 - if a takeover bid is made, shareholders can compare the bid price to a realistic NAV, to check if the assets are being given away too cheaply;
 - if a liquidation seems a possibility, the NAV provides shareholders with an indication of the amount they might receive, and helps them to judge whether to hold onto or sell the shares.

C5F Limitations of investment ratios

The use of percentages and ratios can help in the assessment of trends and in comparisons with similar companies. In particular they can highlight aspects of a company that may merit closer scrutiny. There are however, a number of limitations, including the following:

- Different accounting policies can be used to calculate profits and value assets, making comparisons between companies in the same industry difficult.
- The management may decide to change the accounting policy of a company over the years, making comparisons over time misleading.
- Many ratios have to be calculated using historical data from accounts, but this may not be the best guide to future performance and investment potential.
- When considering trends over several years, periods where there has been high inflation can produce misleading figures. The reported figures may show an upward trend, but in real terms they could be static or even declining.

C6 Indices

Stock market indices bring together the movements of individual share prices and show the direction in which a market has moved over a period of time. Indices can be used for a variety of purposes, i.e. to:

- compare the performance of a particular share with its sector or with the market as a whole; and
- compare the performance of a fund manager with the performance of the market as a whole.
 - Many fund managers aim to beat the market, although an increasing number aim to track passively the rise and fall of indices.

C6A Variety of indices

Indices are constructed in a variety of ways and reflect many different types of market. There are indices reflecting most types of investment, including property, art and antiques, fixed-interest securities, as well as the most commonly used indices measuring equities. Among equity indices, there are many different types measuring a wide variety of markets and market sectors.

It is important to choose an appropriate index against which to measure performance.



Example 1.11

Depending on whether the fund is a general or more specialised one, the performance of a UK equity portfolio may be measured against:

- an index that reflects the whole market;
- just the very largest companies;
- possibly the smaller companies; or even
- particular sectors of the market.

C6B FTSE Group

The FTSE Group is wholly owned by the London Stock Exchange. It provides a wide range of stock market indices and associated data services. FTSE maintains a range of indices that are widely used and quoted, helping investors make informed investment decisions and benchmark the performance of their investments. FTSE calculates over 120,000 end-of-day and real-time indices covering more than 80 countries and all major asset classes.

The indices are all arithmetic weighted, where the weights are the market capitalisation of each company, rather than being based simply on share price movements. Market capitalisation is the stock market valuation of a company, which is calculated by multiplying the number of shares in issue by their market price.



Reinforce

It is important to remember:

- the larger the company, the bigger its weighting in the index; and
- the price movement of a larger company (say, representing 5% of the value of the index) will, therefore, have a larger effect on the index than a smaller company (e.g. 1% of the index value).

FTSE constituent weightings are adjusted to reflect the free float of shares for each company as follows:

- the free float of a stock is the proportion of shares that are available for trading on the stock

market; and

- the weightings of companies with less than 75% of their shares available for public trading are reduced to reflect the available free float.

The free float adjustment is to cope with situations where only a limited quantity of stock is available for public trading because directors or a subsidiary company own a large percentage of the shares. This more accurately reflects the available supply, rather than just weighting by market capitalisation.

The price index is the sum of the market values (or capitalisations) of all companies within the index, after the weightings have been adjusted to reflect the available free float of stock. There are eight main UK equity indices relating to different levels of capitalisation, of which the FTSE 100 is the best known and most widely quoted.

The main indices are as described in the following sections.

Table 1.19: Main FTSE indices

FTSE All-Share Index	<ul style="list-style-type: none"> • The FTSE All-Share Index tracks the market value of the FTSE 100 and FTSE 250 plus almost 300 smaller companies. The FTSE All-Share comprises the FTSE 100, the FTSE 250 and the FTSE Small Cap. It is the widest market index, consisting of over 600 companies representing about 98% of the London Stock Exchange. • This index: <ul style="list-style-type: none"> ◦ represents the performance of all eligible companies listed on the London Stock Exchange's main market which pass screening for size and liquidity. ◦ is calculated in real time, and the constituent companies are reviewed quarterly with an annual rebalance in June; ◦ is divided into sectors representing different market sectors; ◦ is designed to behave in much the same way as an actual portfolio and can be used as a reliable indicator of the London market's long-term performance; and ◦ is often used as the basis for index-tracking funds. • It tends to move more slowly than the FTSE 100, which consists of just the top 100 companies (the All-Share index contains some relatively inactive components).
FTSE 100	<ul style="list-style-type: none"> • The FTSE 100 is the UK's best-known market index and tracks the value of the 100 biggest companies listed on the London Stock Exchange. • Its membership is revised quarterly in March, June, September and December: <ul style="list-style-type: none"> ◦ changes to the constituents can be prompted by new listings on the exchange, mergers and acquisitions or an increase or decrease in market capitalisation; and ◦ movements by companies into and out of the index can have a considerable effect on the share value of a company because of the need for index-tracking funds that use the FTSE 100 as their basis to rebalance their portfolios. • It is updated constantly during trading hours, i.e. it is a real-time index. • The FTSE 100 represents approximately 81% of the total UK market capitalisation of all shares listed on the UK market, and is used extensively as a basis for investment products, such as derivatives and ETFs.
FTSE 250	<ul style="list-style-type: none"> • The next 250 largest companies by market capitalisation immediately below the FTSE 100 make up the FTSE 250, in other words the companies are ranked from 101 to 350 by market cap. • This index represents approximately 15% of the UK market capitalisation. • It is a real-time index that is updated constantly during trading hours. The constituent companies are reviewed quarterly in March, June, September and December.
FTSE 350	<ul style="list-style-type: none"> • The FTSE 350 is a combination of the FTSE 100 and the FTSE 250 indices and covers 96% of the

- UK market capitalisation.
- It is a real time index and the constituent companies are reviewed quarterly in March, June, September and December.

Other FTSE indices include:

FTSE SmallCap

This is made up of the companies in the FTSE All-Share that are too small to qualify for the top 350.

FTSE Fledgling

This index is made up of companies listed on the main market of the London Stock Exchange, which are eligible for the FTSE UK series but are too small for the FTSE All-Share. There is no liquidity requirement for companies in this index and constituent companies are reviewed annually in June.

FTSE AIM index series

The FTSE AIM index series is for young and growing companies traded on the AIM. The AIM Index series comprises the following real-time indices:

Table 1.20: FTSE AIM index series	
Index	Composition
FTSE AIM UK 50 Index	The 50 largest eligible UK companies
FTSE AIM 100 Index	The 100 largest eligible UK companies
FTSE AIM All-Share Index	All AIM quoted companies that meet the FTSE eligibility criteria
FTSE AIM All-Share Supersector Indices	These are derived from the FTSE AIM All-Share Index and are based on the Industry Classification Benchmark (ICB). They provide an investor with 19 indices with which to identify macroeconomic trading and investment opportunities.

To be eligible for inclusion in these indices, every stock has to be liquid and readily tradeable. The liquidity of the companies is reviewed annually, and the constituent companies reviewed quarterly in March, June, September and December.

These are all real-time indices, which are constantly updated during trading hours.

Other FTSE indices

A number of other FTSE indices are also produced, which cover specific areas of the main market:

- **FTSE TMT:** the performance of companies in the Technology, Media and Telecommunications sectors;
- **FTSE techMARK All-Share:** comprising all of the companies included within the London Stock Exchange's techMARK sector for innovative technology stocks; and
- **FTSE4Good:** designed to measure the performance of companies that meet globally recognised corporate social responsibility standards.

C6C Other indices

In addition to the main UK equity indices, there are a range of specialist indices covering markets other than equities, e.g.:

- FTSE Actuaries UK Conventional Gilts All Stocks Index – includes all British Government Securities quoted on the London Stock Exchange; and
- FTSE Sterling Corporate Bond Index covering sterling-denominated corporate bonds of investment grade quality.

C6D Overseas indices

There are widely published indices for all major overseas markets, which provide an indication of local market performance and can be used to assess the performance of the overseas element of an investment portfolio.

Table 1.21: Main overseas indices

Country	Equity Index
USA	Dow Jones Industrial Standard & Poor's Composite (i.e. S&P 500) NASDAQ
Japan	Nikkei 225 Topix
Germany	DAX 30
France	CAC 40
Hong Kong	Hang Seng

Australia	S&P All Ordinaries
South Africa	FTSE/JSE All-Share
Spain	IGBM (Bolsa de Madrid General index)
Europe	FTSEurofirst 300

US equity indices

- **The Dow Jones Industrial Average**

This is the most well-known US index. The main points to note are as follows:

- It takes the share prices of 30 blue chip companies and measures their movements.
- It is calculated by adding the New York Stock closing prices and adjusting them by a ‘current average divisor’, an adjustable figure formulated to preserve the continuity of the Dow over time amid changes in its component parts.
- Three specialist indices are also provided covering Home Bonds, Transport and Utilities.

- **Standard & Poor’s (S&P) Composite**

This is a composite index consisting of 500 companies listed on the New York Stock Exchange. The S&P 500 is generally regarded as a good guide to the US market, representing around 75% by capitalisation of the New York Stock Exchange. Stocks in the index are weighted according to their market capitalisation.

The NASDAQ Composite

The NASDAQ Composite is an index of small young companies, which operate in fast-growing sectors such as information technology and biotechnology. It is often used as a proxy for the performance of US technology stocks.

Japanese equity indices

The **Nikkei 225** is the most widely quoted measure of stock movements on the Tokyo Stock Exchange. The Nikkei 225 is not strictly an index but is based on the average of 225 stocks. It isn’t weighted according to market capitalisation, so smaller firms can move the index as much as bigger ones. Finally, it may be regarded as a broad benchmark similar to the Dow Jones.

There is a more comprehensive **Tokyo Stock Exchange Index (Topix)**, which provides a better guide to the overall market, but it is not as widely followed as the Nikkei 225. Similarly, the Nikkei 300, which gives broader coverage, is less popular than its 225 counterpart.

Germany equity index

The **DAX 30** consists of the 30 largest quoted German companies, calculated in real time. It is value weighted, and is the basis of futures and options traded on the Deutsche Termin Börse (DTB); unusually for an index, it includes reinvested income.

Hong Kong equity index

The **Hang Seng Index** is designed to serve as an indicator of the broad movements in the Hong Kong stock market. It is composed of a representative sample of Hong Kong stocks, and is value weighted.

France equity indices

The **CAC General Index** records the opening prices on the Paris cash market.

The **CAC 40** is a real-time value-weighted index of the largest stocks.

World equity indices

Other widely used overseas indices are the **MSCI World Index** series and the **FTSE All-World Index**, which covers global equity markets and comprises over 3,000 stocks from 47 countries.

C6E Limitations of indices

Indices are widely used for comparing the performance of actual portfolios. It is important to understand their construction and limitations to understand how they can be used as a valid benchmark to evaluate a portfolio's performance.

Most modern indices (and all the FTSE indices) are weighted by market capitalisation. This means that they reflect the relative value of big and small companies on the market. Some older indices are a crude average of price movements. The modern approach is clearly more realistic, but investors should remember that a few large companies can have a very substantial effect on the market.

Most indices only reflect changes in capital values, although reinvested dividend income can make a substantial difference to long-term performance. Most indices can also be calculated with an allowance for dividend income reinvested, because they provide a record of yields from the basket of shares in the index. However, they take no account of tax. The FTSE All-Share Index and its subsections include a total return index, which is based on reinvested income.

Other things to bear in mind are that:

- indices do not include the costs of buying and selling, CGT or management expenses; and
- the index assumes that the investor is fully committed to the market and holds no cash balances. In the long term, cash holdings tend to lead to underperformance, but in the short term it can improve performance if the market declines.

D Property

Until the development of the stock markets, property was virtually the only asset-backed investment available. Today property provides a way of diversifying an investor's portfolio, as it offers different investment characteristics from other assets.

Table 1.22: Characteristics of property	
Property prices are affected by	<ul style="list-style-type: none">• The prosperity of an area or an economy can boost or depress prices. In locations where

supply and demand. However, demand can fluctuate with changing economic, financial and demographic circumstances.

businesses are flourishing and people wish to live, demand for property will rise, and with it rents and property values.

- Commercial property values only follow business profitability in very general terms and the property cycle is likely to be different from the business cycle.
- Tenants of commercial property have to pay their rent even when they make a loss. Commercial property therefore, has some of the general characteristics of fixed-interest securities, although if a property becomes vacant and tenants cannot be found, the asset can become a drain on resources.
- There are many different types of property available, ranging from small flats in the residential sector to retail and industrial estates in the commercial sector. The returns from different types of property can vary quite considerably.
- The commercial and residential property markets usually display very different characteristics, although both tend to be related to the overall performance of the economy, at least in the long term.
- Depending on the wealth of an investor, one of the key investment decisions is whether to buy property directly or through a collective investment scheme, which would usually provide a wider spread of investment.

Property is an asset-backed investment and can, therefore, provide long-term protection against inflation. It has characteristics that make it different from equities and so offers investors the opportunity to diversify a portfolio, while offering the prospect of reasonable long-term returns.

D1 Residential property investment

Over the past few years, residential buy to let has become a popular investment, not least when falling yields on equities and bonds make rental yields appear relatively attractive. Strong capital performance has added to the appeal of buy to let.

D1A Drawbacks of property investment

The main drawbacks of property investment are:

- lack of liquidity;
- costs associated with the initial purchase and ongoing management of the property; and
- void periods, when a tenant cannot be found.

Table 1.23: Drawbacks of property investment

Liquidity	<ul style="list-style-type: none"> • Property is expensive to buy and sell, with increased rates of stamp duty land tax (SDLT) for second properties, legal costs and usually estate agent fees to pay;
------------------	--

- the sale of a property can be a slow process;
- when the property market is poor, it can be virtually impossible to sell, except at a greatly reduced price in relation to normal values; and
- it is not usually possible to sell properties in ‘bits’ (unlike an equity portfolio) to boost income or take advantage of the annual CGT exempt amount.

Management issues

- Letting property should be considered a form of business. It requires the administrative, financial and marketing skills that are needed in most small enterprises. Letting property also involves commitment and patience with the customers – in this case the tenants.
- Investors need to decide whether to manage their own properties or to use specialist letting and management agencies.
- Managing a property without an agent saves fees, but is not recommended unless the investor has an aptitude for the work as well as enough time to carry it out. It is also helpful to live sufficiently close to the property to be able to look after it and deal with tenants effectively.
- Choosing an effective manager is as difficult as choosing any other professional adviser or service provider: quality varies between managers and agency fees vary significantly.
- Some agencies charge fees on the basis of a flat 10%–15% (plus VAT) of rents collected, others charge a fee for letting plus a collection fee. The second option may be cheaper where lettings are arranged for long periods, but could be very expensive for properties where the turnover of tenants is frequent.

Void periods

- Property investment carries with it the risk of the loss of rent.
- Loss of rent can arise where:
 - there is no tenant (for example, when an existing tenant vacates the property at the end of a lease, and no new tenant can be found); or
 - a tenant occupying a property fails to pay the rent.



Consider this...

In what circumstances can loss of rent occur and how can landlords reduce the risk of this happening?

Although a landlord is protected by property law, enforcing the law may involve the services of a solicitor, incurring additional costs. It may be difficult to find tenants in areas where there is a surplus of rental property, or in areas that have become unfashionable or neglected. Investors who have borrowed heavily are most affected by void periods.

D1B Choosing a property

There can be regional variations in both income returns and capital growth, as well as variations in returns between different types of property. Many different factors need to be taken into account when choosing property that is appropriate for letting, some of the key issues are noted below.

Table 1.24: Choosing a property for letting

Location	<ul style="list-style-type: none"> • Where the property is situated is often the most important issue when buying a property. • Very small differences in location, from one street to the next, can make substantial differences to values and prospects for growth.
Tenants	<ul style="list-style-type: none"> • Each type of tenant has advantages and drawbacks. Categories can range from students to diplomats and generally the poorer the quality of tenant, the higher the yield. Great care should be taken to investigate the local letting market before any purchase is made.

Age and condition of the property	<ul style="list-style-type: none"> • Maintenance costs can greatly reduce or even eliminate the income from a property. • In a competitive market, where tenants have a choice of properties to rent, older property may need to be upgraded to make it more attractive, as good presentation is important at all levels of the rental market. • It is usually worth buying newer property for renting.
Diversification	<ul style="list-style-type: none"> • Where an investor has substantial funds it is generally safer to invest in more than one property, although buying property in different locations can increase management costs. • Diversification can reduce an investor's exposure to the risks of defaulting tenants, adverse planning issues and changes in the local economy. • If properties are all in the same area, these risks will be concentrated.

D1C Tenure

Property owners should always let under assured shorthold leases, which are for defined periods. There is no minimum period but it is usually for six or twelve months. However, they are not usually subject to rent controls.

They do not give a tenant security (beyond the first six months), since at the end of the period of the tenancy the landlord can decide not to renew it.

Residential landlords often avoid long rental agreements, as they tend to depress property values.

D1D Prospect for capital growth

One of the main attractions behind property purchase has been the prospect of long-term capital growth.

Residential property prices in the UK are predominantly driven by the owner-occupier market. In the long term, prices tend to follow the growth in average earnings.

Over the past ten years, property prices have risen by considerably more than inflation, but past performance does not guarantee future success.

D2 Expected yield

Rental yields vary significantly between different properties and different locations. As a general rule, the larger the property the lower the yield.

Currently, the private rental sector has seen a huge surge in demand as first-time buyers continue to struggle to get on the property ladder.

Certain things, however, are often overlooked when considering residential property investment and these are:

- the costs of buying the property; and
- the relatively high level of ongoing expenses that are involved.

General expenses such as the costs of managing agents, maintenance and buildings insurance all impact on the overall yield on the investment, reducing it on average by around 25%. The effect of this can be illustrated by the following example.



Example 1.12
Rental yield

A property is advertised at £175,000, with potential rental income of £900 per month. The headline gross yield would be:

$$\frac{\text{Gross rent}}{\text{Market price}} = \left(\frac{£900 \times 12}{£175,000} \right) \times 100 = 6.2\%$$

In practice, the costs of buying, including legal fees, the survey, increased rates of stamp duty land tax (SDLT) and basic furnishings might add another £8,000 to the advertised price.

General management expenses (for simplicity 25%) will need to be deducted from the rent:

$$\frac{\text{Gross rent} - \text{expenses}}{\text{Market price} + \text{costs of buying}} = \left(\frac{ (£900 - £225) \times 12 }{ £175,000 + £8,000 } \right) \times 100 = 4.43\%$$

If there are void periods between lets of only a few weeks, they can reduce the yield even further.

D3 Stamp duty land tax (SDLT)

SDLT is paid on purchases in England, Wales and Northern Ireland of land and property and certain leases. The buyer or tenant is responsible for completing the relevant SDLT forms, submitting them to HM Revenue and Customs (HMRC) and paying the tax. Usually however, the completion and submission of the forms would be handled by the solicitor dealing with the transaction. Transactions needing notification must be notified to HMRC and the tax paid within 30 days of the date of the transaction taking place.

SDLT transactions fall broadly into two categories: buying land or premises and leasing land or premises.

D3A Buying land or premises

SDLT was restructured with effect from 4 December 2014 for **residential** land transactions in England, Wales and Northern Ireland. Instead of one rate of tax applying to the entire purchase price, SDLT is only paid at the rate of tax on the part of the purchase price within each tax band. The bands are shown in table 1.25:

Slice of property value	Rate %
£0–£125,000	0
£125,001–£250,000	2

£250,001–£925,000	5
£925,001–£1,500,000	10
£1,500,001+	12



Example 1.13

The SDLT payable on a residential transaction of £275,000 is £3,750.

This is calculated as follows:

First £125,000 at 0%	0
£250,000 – £125,000 = £125,000 at 2%	£2,500
£275,000 – £250,000 = £25,000 at 5%	£1,250
Total	£3,750

Since 1 April 2016, an additional 3% has been charged on top of the normal SDLT rate(s) on purchases of second residential properties over £40,000, e.g. a second home or a buy to let property. The 3% SDLT surcharge is not paid if the property being purchased is replacing a main residence, which has already been sold.

SDLT continues to be charged at 15% on residential dwellings costing more than £500,000 bought by bodies such as companies and collective investment schemes. There are some exceptions e.g. SDLT will be paid on the current rates and bands where the property is used for a property rental business. Commercial SDLT is unchanged, see Table 1.26:

On total	Rate %
£0–£150,000	0
£150,001–£250,000	2
£250,001+	5

D3B Leasing land or premises

SDLT is charged on the **net present value (NPV)** of rent payable under a lease. Broadly this is calculated by:

- multiplying the annual rent by the term of the lease;
- then applying a discount, to allow for inflation; and
- finally deducting the threshold figure.

If the NPV of the rent does not exceed the threshold of £125,000 for residential property and £150,000 for commercial property, no SDLT is charged. Where it is above the threshold, tax is chargeable at a rate of 1% on the amount of the NPV adjusted rent in excess of the threshold for residential leases, and at a rate of 1% up to £5m and then 2% thereafter for commercial leases.

D4 Scotland – Land and Buildings Transaction Tax (LBTT)

Land and Buildings Transaction Tax (LBTT) has replaced SDLT in Scotland since 1 April 2015. It is applied to both residential and commercial land and buildings transactions, and operates progressively in the same way as SDLT. However, the property value bands differ from those for SDLT as shown in Table 1.27:

Slice of property value	Rate %
£0–£145,000	0
£145,001–£250,000	2
£250,001–£325,000	5
£325,001–£750,000	10
£750,001+	12



Example 1.14

A house transaction in Scotland for £275,000 will result in a LBTT payment of £3,350 (£400 less than in England – see example 1.13):

First £145,000 at 0%	0
£250,000 – £145,000 = £105,000 at 2%	£2,100
£275,000 – £250,000 = £25,000 at 5%	£1,250

Table 1.28: Scotland – non-residential LBTT (2017/18)

Slice of property value	Rate %
£0–£150,000	0
£150,001–£350,000	3
£350,001+	4.5

D5 Letting part of an individual’s main residence

Individuals who receive rent from letting rooms in their own homes are entitled to a special exemption from tax. This exemption, known as ‘rent-a-room’ relief, extends to owners and tenants who let furnished rooms in their only or main residence. The relief does not apply to a self-contained unit or unfurnished accommodation.



Qualifying rules for exemption from tax

The qualifying rules are as follows:

- The individual must occupy the property as their main residence at the same time as the tenant.
- No tax is payable if the gross rent for a tax year, before deducting expenses, does not exceed £7,500.
- There is only one exempt amount per residence.
- If another individual is also receiving rent from letting accommodation in the same property, the relief is £3,750 each. This could arise, for example, where an owner lets part of a property to a tenant, who sub-lets to a sub-tenant. Both the owner and the tenant may each obtain a maximum exemption of £3,750.
- The rent taken into account is the payment for the accommodation plus any payment for related goods and services.
- If the rent exceeds £7,500, taxpayers have a choice. They can either:
 - choose to pay tax on the excess over £7,500 with no deduction for expenses; or
 - be taxed on the gross rent received, less expenses, with no rent-a-room relief.

D6 Commercial property investment

The commercial property market is divided into three main sectors:

- retail (shops);
- office buildings; and
- industrial properties (factories and warehouses).

The retail sector is often the lowest yielding, while industrial property, with its shorter lifespan, is the highest yielding.

Investment in commercial property tends to be a specialised part of the overall investment sector. A significant proportion of investment property is owned by insurance companies and pension funds.

D6A Past performance

Commercial property values tend to follow a cyclical pattern. They often move in a different direction to equities and sometimes to residential property.

It is perhaps more relevant to look at the returns in comparison with those earned on equities and bonds. Commercial property has the potential to diversify the risks of an investment portfolio and at times produce returns that are not correlated to broader bond and equity market movements.

More importantly, what it demonstrates is that commercial property returns are clearly dependent on the economic cycle and so display periods of growth and contraction.

D6B Investment considerations



Consider this...

An important consideration in all let property investment is the quality of the tenant and their ongoing ability to pay the rent. A property has intrinsic value as a potential source of income, even if it is empty, but it is likely to be worth more as an investment with a financially secure tenant.

Commercial property investors aim to diversify by having properties in each of the three main sectors – retail, office and industrial – with a geographic spread throughout the UK. There is now also a trend to invest in commercial property internationally, following the pattern of equity and bond investment.

Building such a diversified portfolio through direct investment is limited to the richest investors (mostly larger institutions), because of the cost of individual properties. Less wealthy investors gain their diversification by using collective funds, including real estate investment trusts.

Commercial property owners prefer long leases as they enhance their property values. Traditionally commercial properties are valued as a multiple of the rent they produce. However, valuations can change with market expectations of future growth as follows:

- High multiple, i.e. a low yield, reflects future prospects of strong growth coupled with reasonable security.
- Retail properties usually have the lowest income yield, while industrial properties have the highest.

Leases on commercial property usually pass full responsibility for maintenance and insurance costs onto the tenant, so that the net income from commercial property is typically higher than from residential property.

The income is also more secure as rental agreements are much longer than residential property leases. One of the attractions of commercial property in the UK has been the use by landlords of leases that were often typically for 25 years. However, they have tended to reduce in recent years and now average less than ten years.

Rental agreements are also becoming more flexible, with break options that allow the tenant to leave.

However, the increased flexibility means that the tenant generally ends up paying more to compensate the landlord for reduced security of income.

The rent paid by the tenant is usually reviewed every three or five years, with some leases including an upwards only review provision. However, there has been political pressure to end this practice and rents may now be linked to inflation or turnover.

D6C Problems with investing in commercial property

In considering commercial property as an alternative form of investment, an investor should be aware of its shortcomings.



Drawbacks of commercial property investment

These are as follows:

- The sale and purchase of commercial property is a relatively slow and often complex process. Transaction and marketing costs often add around 6% to the purchase price. SDLT alone is 5% on purchases of properties valued at over £250,000.
- Commercial property traditionally offers the opportunity for good income growth, linked to rent increases. However, the growth typically takes place in steps as most rent reviews take place after specified periods (usually three or five years).
- A property is not easily divided into segments and can usually only be sold as a whole. This may not meet the requirements of an individual investor.
- The commercial property market is difficult to analyse. It is characterised by a few transactions involving large sums, with restricted information regarding the prices and conditions involved.
- There can be a time lag in increasing the supply of property to meet extra demand, which can result in an over-supply.

E Alternative investments

Alternative investments can provide diversification to an investor's portfolio. There have been certain time periods when they have increased in value, although they often gain in popularity when other, more traditional investment areas, are depressed.

Alternative forms of investment can encompass a wide range of unconventional investments. In addition to direct investment in works of art and other collectables, such as coins and stamps, there is an expanding range of funds being offered to investors that invest in commodities, with themes that include agriculture, infrastructure and alternative energy.

E1 Works of art and collectables

Works of art and collectables cover a wide range of objects, from paintings costing tens of millions of pounds, to special edition plates or medals. Almost anything can attract the attention of collectors, however the returns can vary widely.

Items that may appeal to an investor include paintings, antique furniture, rare books and manuscripts, memorabilia, vintage wine, stamps, coins, limited edition plates, etc., diamonds, gold and cars. Most investments in physical assets have certain common characteristics, as follows:

- they usually do not generate any form of income or financial return;
- they often cost money to keep, and may incur charges in the form of insurance premiums, specialist

- storage charges, security costs or maintenance;
- their value is dependent on limited supply and fluctuating demand;
- demand is driven by the tastes of collectors and in particular by their number and wealth;
- tastes can be conditioned by experts who in many cases have been responsible for increasing the popularity of certain items, which has created demand and increased prices; and
- authenticity can be very important to the value of an alternative investment and an interesting provenance, i.e. being connected with a particular historic event or previously owned by a celebrity, can boost its value.

E1A Investment performance

The performance of collectables has been variable. Although their value generally tends to rise in line with inflation, there have been periods when some investments have outperformed inflation, while others have shown substantial underperformance.



Example 1.15

In the 1970s, the British Rail Pension Fund purchased a substantial portfolio of high quality art and antiques when prices were relatively low. These were disposed of during the 1980s and early 1990s when prices were at their peak. These investments provided similar returns to the fund's equity portfolio, however, other investors have been less fortunate in their timing and choice of investments.

The basic economics behind a rising alternative investment market is a fixed or declining supply (e.g. eighteenth-century English furniture) and increasing demand, e.g. private investors and museums.

One threat is that supply is not fixed because of the manufacture or discovery of reproductions. Another danger is that buyers lose interest or the funds to buy. Prices may rise, but often in a volatile pattern. If they fall there is usually no floor or intrinsic economic value as there would be with an asset that produced an income.

E1B Investment viability

When considering whether to buy a particular asset as an investment, it is worth taking into account the following points:

- The difference between buying and selling prices can be much greater than for conventional investments. It is not uncommon for dealers to have mark-ups of 50% to 100% on antiques and other objects, so that an item bought for £1,000 might only realise £500 or less when it is sold.
- The state of repair can be very important to the value of an object. Restoration, storage and insurance can all add to the cost and risk.
- It is not always possible to be totally sure of the genuineness or quality of an article, e.g. pictures, furniture and diamonds are all assessed according to criteria that are at least partly subjective. Mistakes can be made.
- Tastes change, e.g. Victorian paintings dropped in value in the early years of the twentieth century, but have climbed again since the 1960s, although by no means always to their original real values.
- Some markets are dominated by a small number of buyers and sellers. When they are buying, prices move upwards rapidly. If they sell or stop buying, prices can fall.
- An investor can obtain pleasure from many types of collectables. Even if a purchase turns out to be a poor financial investment, it may provide some enjoyment for the investor. Collectors who know and

- enjoy the items they collect are probably more likely to invest successfully.
- It can be difficult to diversify and specialist knowledge is needed to buy successfully.

E2 Commodities

Commodities are raw materials that fall into two broad classifications, hard or soft, as follows:

- **hard commodities** are the products of mining and other extractive processes – they include metals such as gold and silver, crude oil and natural gas; and
- **soft commodities** are typically grown rather than mined – they include coffee, cocoa, sugar, corn, wheat and livestock.



Consider this...

As an asset class, commodities can appeal to some investors as part of an overall strategy of spreading risk by diversifying their investment portfolio. This is because their prices tend not to move in tandem with equity or bond prices. In other words, commodities have low correlation with other assets.

In recent years, commodity prices have risen sharply as demand for raw materials in developing countries has increased significantly. However, the prices of various commodities are often volatile and there can be short-term supply-and-demand issues. These can include exploration and extraction activity and worldwide economic growth rates, as well as climatic factors and stock levels. There is a higher probability of sudden and unfavourable price changes in commodity prices than there is of a sudden collapse in share prices.



Example 1.16

Gold as a safe haven

Gold is one of the most popular of the precious metals, and investors frequently flock to it as a safe haven when the economy is struggling, as it is seen as useful for hedging against inflation. Gold prices move to reflect supply and demand just as any other commodity, often responding quickly to economic events. Many people see long-term value in holding gold as part of a diversified portfolio.

Direct investment in commodities is not practical for most investors. However, commodity investment can be arranged in a number of other ways, such as investing in:

- companies that produce commodities;
- funds that invest in commodities; or
- exchange traded commodities (ETCs).

E2A Risks

Commodity investment is risky because the markets are dominated by trading interests like big metal companies and big coffee traders, which are more likely than private individuals to learn the latest information likely to move prices. Thus, prices will be volatile. There is also political risk to consider; instability in the Middle East can threaten the supply of oil which can affect prices – something we have witnessed in recent years. Although commodities offer useful diversification to a portfolio, private investors need to be aware of the risks involved in including them within their portfolio through indirect investment vehicles such as ETCs.

Private investors should also be aware that while commodities offer diversification, they are cyclical, and good timing is essential.



Key points

The main ideas covered by this chapter can be summarised as follows:

Equities

- Equities offer the potential for long-term real growth, but will not be suitable for all investors.
- Share prices are influenced by economic and political factors that affect the market as a whole, as well as by factors that are company specific.
- The two main classes of shares are ordinary shares and preference shares, although there are a number of variations of both. They differ in respect of their holders' rights to receive dividends, control the company and to receive capital if the company is liquidated.
- Investment ratios allow investors to identify trends in a company's performance and compare the performance of similar companies.
- The use of percentages and ratios has a number of limitations. However, they can highlight aspects of a company's performance that may merit closer scrutiny.
- Stock market indices bring together the movements of individual share prices and show the direction in which a market has moved over a period of time.
- Indices can be used to compare the performance of a particular share with its sector or with the market as a whole, or to compare the performance of a fund manager with the performance of the market as a whole.

Property

- Property is an asset-backed investment that can provide long-term protection against inflation.
- Property can add balance to a portfolio, but is not always easily realisable.
- Historically, long-term growth has made property attractive to an investor, but past performance does not guarantee future success.
- Returns can vary significantly between regions, and between different types of property.
- The relatively high level of expenses can significantly reduce the annual yield on direct property investment.
- Commercial property generally displays different characteristics to residential property.

Alternative investments

- Collectables can provide diversification to a portfolio, but they provide no income and will incur charges not usually associated with other investments.

Question answers



1.4 The dividend yield would be:

$$\text{Dividend yield} = \frac{16.5}{292} \times 100 = 5.65\%$$

1.5 The dividend cover would be:

$$\text{Dividend cover} = \frac{58}{26} = 2.23 \text{ times}$$

1.6 The P/E ratio would be:

$$\text{P/E ratio} = \frac{410}{38.5} = 10.65$$



Self-test questions

10. What two factors tend to influence the price movements of an individual share?

11. Is a rise in interest rates likely to raise or depress the share price of building companies?

12. To what extent is a preference share comparable to a corporate bond?

13. Which type of share ranks lowest if a company goes into liquidation?

14. A client is considering investing in listed private equity companies. What are the risks associated with this type of investment?

15. What is a P/E ratio and what does it tell an investor about the potential for growth in the share price?

16. Why might it be appropriate to include property within an investment portfolio?

17. What are the disadvantages of investing in a work of art?

18. What are the two broad classifications for commodities?

You will find the answers at the back of the book

Appendix 1.1: Sample accounts for Green Trees plc

Statement of comprehensive income of Green Trees plc for 52 weeks ending 31 December

	£000s	£000s
Turnover		27,741
Cost of sales		<u>(22,497)</u>
Gross profit		5,244
Distribution costs	1,653	
Administration costs	<u>1,903</u>	<u>(3,556)</u>
Net operating profit		1,688
Interest payable	157	<u> </u>
Profit on ordinary activities before taxation		1,531
Tax on ordinary activities		<u>(459)</u>
Profit for the financial year		1,072
Dividends Preference	63	
Ordinary	<u>426</u>	<u>(489)</u>
Retained profit for the year		<u>583</u>



Statement of financial position of Green Trees plc at 31 December

	£000s	£000s	£000s
Fixed assets			
Tangible assets			8,570
Current assets			
Stock	4,095		
Debtors	2,462		
Cash at bank and in hand	<u>371</u>		
		6,928	
Current liabilities			
Trade creditors	3,465		
Corporation tax	<u>783</u>		
		<u>4,248</u>	
Net current assets			<u>2,680</u>
Total assets less current liabilities			<u>11,250</u>
Long-term debt			
Debenture loan stock		750	
Unsecured loan stock		<u>750</u>	
			1,500
Capital and reserves			
Authorised and issued			
Ordinary shares		5,000	
Preference shares		1,000	
Profit and loss account		<u>3,750</u>	
			<u>9,750</u>
Total capital employed			<u>11,250</u>

Current market price of ordinary shares is 200p



2 The macro-economic environment and its impact on asset classes

Contents	Syllabus learning outcomes
Learning objectives	
Introduction	
Key terms	
A Trends in investment markets	2.1
B World economies and globalisation	2.1
C Economic and financial cycles	2.2
D Fiscal and monetary policy	2.3
E Money supply	2.3
F Balance of payments	2.3
G Role of financial investment in the economy	2.3
Key points	
Question answers	
Self-test questions	

Learning objectives

After studying this chapter, you should be able to:

- describe the impact of major changes to and trends in investment markets;
- describe the impact of socio-economic issues on investment markets;
- explain how the effects of globalisation impact on investment markets;
- explain how changes in economic growth and business cycles can impact on investment markets;
- identify the main key economic indicators;
- explain the significance of fiscal and monetary policy;
- describe the link between money supply and inflation, interest rates and exchange rates;
- explain how the effects of inflation, the role of interest rates, exchange rates and expectations of future changes impact on investments;
- explain the importance of the balance of payments for a country; and
- explain the role of financial investment in the economy.

Introduction

It is important that investors are alert to political developments because of the potential impact of changes in economic policy on the economy. Governments are in a powerful position to influence economic and financial conditions.

This chapter examines the key economic trends and their impact on asset classes, the key economic indicators and the impact of monetary and fiscal policy.



Key terms

This chapter features explanations of the following:

Balance of payments	Business cycles	Deflation	Disinflation
Exchange rates	Financial bubbles	Globalisation	Gross domestic product (GDP)
Inflation	Interest rates	International relations	M4 'broad money'
M0 'narrow money'	Monetary policy	Money supply	Primary market
Quantitative easing	Secondary market		

A Trends in investment markets

A1 Impact of politics generally

Governments are in a powerful position to influence economic and financial conditions. In the financial markets of the USA, the Eurozone, Japan and other countries it is important to keep abreast of the thinking of the central bankers. As international financial markets have grown in influence, there has been a tendency for governments to shed some of their power by making central banks more independent. However, the financial crisis has meant governments have increased their role in finance – notably through bank rescues. The independence of central banks from governments has become less distinct as both parties have worked together with regulators in seeking a resolution to the problems facing the markets.

In a world of low interest rates, the central banker's use of rates to influence the supply of money and control inflation is restricted. This passes more responsibility for economic management onto the government, although this may take the form of extending the central bank's remit, for example, through quantitative easing (creating new monetary reserves) which is covered later in this chapter.

In general, government policies can affect:

- interest rates and currencies;
- business and competition; and
- economic cycles and inflation.

A1A Interest rates and currencies

Political developments can have major effects on interest rates and the value of currencies.

- In early 2009, the UK Government agreed to inject money directly into the economy through **quantitative easing**. The initial purchases of gilts by the Bank of England increased total demand and pushed up their prices, which in turn led to a drop in gilt yields. The combination of low interest rates and quantitative easing was intended to provide the economy with a substantial boost and reduce the risk of inflation falling below the bank's target of 2%.
- Two weeks after a major earthquake devastated northern Japan in March 2011, the Bank of Japan intervened in the currency market, spending up to US\$6.5 billion in a few days' trading. The yen had surged by almost 5% against the US dollar in the aftermath of the tsunami, as speculators anticipated Japanese insurers having to repatriate funds to meet claims. Other central banks joined the Bank of Japan in selling yen to stem the rise, which would have added to deflationary pressures in the Japanese economy.
- The effect that politics can have on interest rates and the value of currencies has been seen in the UK. Since the Brexit vote the pound has fallen and is trading more than 10% lower compared with the euro.

A1B Elections, economic cycles and inflation

Elections are important because of the way governments use economic policy to create the most favourable economic conditions in which voting takes place. The time when governments prefer to rein in the economy is just after the election. This creates the so-called 'electoral cycle' in which booms are generated before elections and an over-heated economy is then cooled down in the first stage of a new

parliament. The ability of politicians to create a 'boom' before an election has been curtailed now that so many central banks have been granted independence.

Historically, the most important effects on inflation have come from governments through taxing and spending decisions. However, in the aftermath of the financial crisis of 2008/09, politicians in most developed countries have used both monetary and fiscal policy to an unprecedented extent to support their economies. This has led to fiscal deficits that would, in previous eras, have prompted fears of impending inflation.



Example 2.1

A couple of examples of the banks' position in monetary policy:

- From late 1992, the Bank of England was given a greater say in monetary policy and, in May 1997, the Chancellor handed operational control over interest rates to the Bank's Monetary Policy Committee.
- The European single currency (the euro) is run by the European Central Bank, which has vigorously demonstrated its independence in the face of political pressure from a variety of quarters, notably its largest constituent country, Germany.

The removal of interest rate-setting powers from the politicians has been diluted by the use of Treasury and central bank balance sheets to support asset prices (mainly via quantitative easing).

A2 Impact of international relations

International political developments can jolt economies, sending shock waves through investment markets. Wars or fear of conflicts can lead to major changes of sentiment among investors and traders. Events such as 9/11 or Russian debt default can also have seismic effects on economies and markets. International relations have become increasingly important as economies and markets have become more globally integrated and interdependent. Financial markets, and equity markets in particular, have become more correlated (i.e. they move increasingly in step) so investors must be aware of international developments when allocating assets.



Example 2.2

Examples of the impact of international events

- **The terrorist attacks in New York and Washington on 11 September 2001** created serious global concerns about a worldwide recession that prompted the major central banks to reduce interest rates rapidly. While the move cannot be entirely credited with averting a recession, it probably helped to reduce its length and severity.
- **The build-up to the second Gulf War (Iraq War 2003–2010)** had several effects on world markets. The dollar and sterling both weakened against the euro as concerns about war grew. Safe haven assets such as gold staged a strong rally, while equity markets were struggling as investors awaited the outcome of UN resolutions and inspections. Many businesses put their investment plans on hold, adding to a downward spiral in confidence. To no small extent, the events mirrored those of the first Gulf War in 1990/91.
- **The rapid growth of the Chinese economy**, as its government has embraced autocratic capitalism, has had major repercussions. In 2007/08, and again in 2010/11, China's expansion was blamed for sharply rising commodity prices. The gradual revaluation of Chinese currency against the US dollar has contributed to a backlash against free trade in the USA. At the same time China has become wary about the fate of its huge dollar reserves and fears that the US government might devalue these by allowing a return of inflation. These concerns appeared to be validated by the decline in the US dollar following the Federal Reserve's quantitative easing in 2010/11. Chinese authorities have even spoken of the need for a new global reserve currency to replace the dollar. During 2015 and early 2016, the country's stock market crashed dramatically and there were fears about a new global financial crisis. The Chinese government introduced a range of measures to help reverse this major downturn.
- **The euro crisis of 2010/11** followed the **credit crunch**, when states that were too weak to fund bank bailouts, (Ireland) or fiscally over-stretched (Greece, Portugal), required bailouts from new mechanisms set up by the member countries of the Eurozone. As some commentators predicted, the single currency had, since its formation in 2000, led to widening disparities in labour costs between efficient Germany, Holland and France and inefficient Spain, Greece, Italy and

Portugal. The latter incurred widening and unsustainable fiscal deficits, requiring some mechanism for fiscal transfers. This was unacceptable to Germany which led to the creation of the European Financial Stability Facility and the European Stability Mechanism based on capital guarantees from member states. However, a lack of firm proposals to reschedule the debts of countries too weak to repay them (especially Greece) led to nervousness in the markets coupled with a weakness of the euro against the dollar and yen.

A3 Speculative fashions

Financial bubbles happen when investors lose sight of fundamental values and buy shares or other assets simply because they expect prices will continue to rise. This is often known as the ‘Greater Fool Theory’, i.e. you rely on a greater fool to purchase the shares at a higher price.



Reinforce

Crashes occur when investors sell shares because they think prices will continue to fall or if they are ‘forced sellers’ due to regulations or losses.

The forced selling of equities to meet solvency requirements by life assurance and pension funds added to the severity of the bear market of 2000–03 following the technology boom in 1999/2000. These speculative episodes are a recurring theme in financial history. They generally occur when excess liquidity allows investors to magnify the financial repercussions of real changes, like technological breakthroughs generating bubbles, or political unrest generating crashes.



Example 2.3

Examples of speculative fashions

The **1999/2000 boom in technology stocks**, which brought several loss-making companies into the FTSE 100, has been described by some commentators as a modern version of ‘tulip mania’. While some investors argued that there was a ‘new paradigm’ and cited how new technology had transformed the US economy, there is no doubt that much of the buying of high-risk dotcom companies was purely speculative. Investor confidence peaked in March 2000 and then fell away rapidly as it became clear that valuations were unrealistic.

The **boom in financial services and banking, which ended with the credit crisis**, was fed by financial innovation that appeared to increase profits while reducing risk. The big idea was ‘create and distribute’, with banks lending money (creating debt) and then repackaging and selling the debt as marketable securities. This was followed by exercises in repackaging the packaged debt, yielding further fees for the banks. It was only when the underlying debt – most notoriously sub-prime residential loans in the USA – started to default that it became clear the risk had not disappeared.

The massive expansion in the **buy to let (BTL) market** in the UK between 2004 and 2007 was fuelled by easy credit and a large increase in city centre developments of flats. To begin with, genuine buy to let investors bought flats, but as prices rose, speculators bought such flats ‘off-plan’, paying in cash only about 10% of the sale price, intending to use bridging loans to complete their purchases before selling on at a profit. The credit crunch brought lending in this sector to a halt, and many flats proved unsellable even at half their original purchase prices.

Some have suggested that loose monetary policy has led to booms as central banks try to stave off recessions. Investors have noticed that there has been a super bull market every decade for the past four decades (1960s US equities, 1970s gold, 1980s Japan, 1990s TMT (Technology, Media and Telecommunications) and banking in the last decade – 2000s) and that the business cycles last for approximately ten years. A possible cause is that in an attempt to revive the economy in the early part of the decade rates are cut too far and liquidity rushes into speculative investments. The mania accelerates towards the end of the decade before collapsing – requiring rates to be cut aggressively once more.

A good example of an interest rate-driven cycle was seen in the US residential property market. The US Federal Reserve (‘Fed’) started cutting short-term rates in response to the fallout from 9/11. The bank

then kept cutting until 2003, when rates reached a floor of 1%. The prolonged spell of very cheap money fuelled a housing boom, which went into reverse in 2006 (with Fed rates peaking at over 5%). When the property bubble burst, and all related sub-prime lending issues, the Fed cut rates again. In 2008 they reached a record low 0.25%. Since 2008 the Fed has raised US interest rates three times; to 0.5% in 2015, to 0.75% in December 2016 and most recently to 1% in March 2017. With the US economy continuing to recover well, interest rate forecasts point to another two hikes in 2017.



Question 2.1

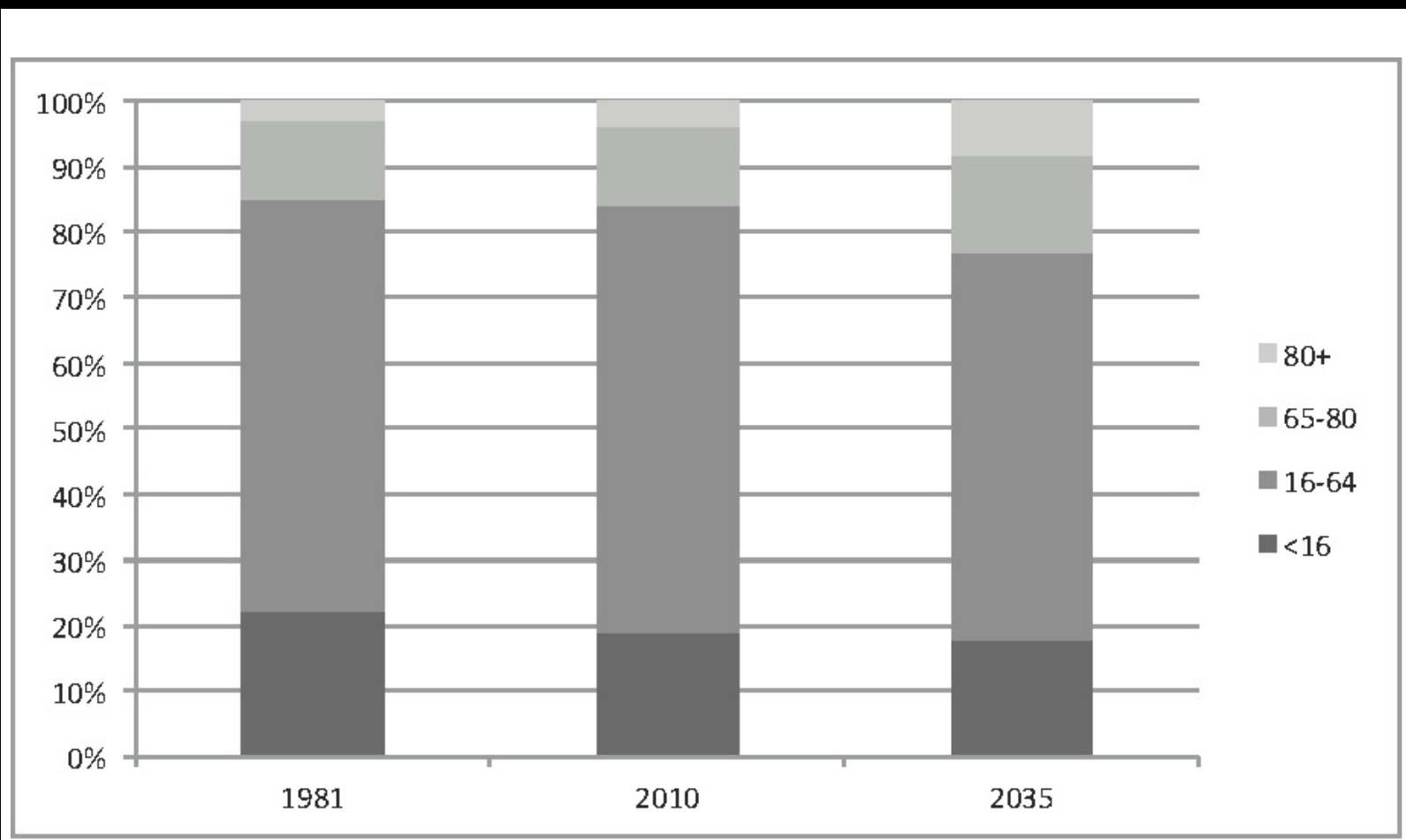
Why do financial bubbles occur?

A4 Socio-economic issues

Around the world people are living longer and birth rates are declining, leading to ageing populations with fewer workers and more people in retirement, issues that can have major long-term effects on investment markets and opportunities. Over the next 50 years we will see a significant ageing of the UK population and its workforce.

From 1985 to 2010 the number of people aged 65 and over increased by 20% to 10.3m; in 2010 17% of the population were aged 65 and over. The number of people aged 85 and over more than doubled over the same period to 1.4m and the percentage aged under 16 fell from 21% to 19%. Population ageing will continue for the next few decades as shown in figure 2.1.

Figure 2.1: Population age structure 1985–2035



This increased longevity should lead not only to more retirees, but also to higher average wealth holdings, as working households increase their savings to fund a longer retirement. This has the following consequences:

- As people become richer, demand for services tends to grow, while the proportion of wealth that is spent on manufactured goods tends to decline.
- This has contributed to the fact that the services sector, particularly banking, insurance and business services, now accounts for the largest proportion of **gross domestic product (GDP)**, while manufacturing continues to decline in importance.
- The ageing of the British population is an important reason why politicians have become more resolute about combating inflation. As members of the baby-boom generation (those born from 1946 to the mid-1960s) gather more financial savings, they have become determined to ensure their value is not wiped out by unanticipated inflation. Elderly dependants, whose number is increasing because of gains in longevity, are also concerned to ensure their savings are not eroded by inflation.

Ageing Western populations are having a significant impact on equity markets as baby-boomers move through the peak years of their lives for investment. This effect is particularly visible in the USA, where investors now hold more in mutual funds than on deposit. The ageing of the West should also boost particular sectors catering for a more elderly population – like financial services, tourism and leisure and health-care products and services.

A5 Technological change

The development and widespread use of new technology is an important consideration in relation to economic growth. Over the last 25 years business has gone through a second industrial revolution based on the microchip and electronics, which has led to the development of new products and improved techniques that allow goods and services to be produced more efficiently. New sectors and industries have been created that offer investors the potential of high growth, but which can often be quite risky investment opportunities.

Technological change happens as a result of the application of science and technology to the production of goods and services.

A country's capacity for technological change is often measured by the proportion of national output devoted to research and development. In practice, the key to national economic performance is not so much the technological innovation of the country, but rather its ability to incorporate international advances into economic production. This ability to adopt cutting-edge technology in turn hinges on the overall education and skills of the workforce.

Inward investment by multinational companies is an important vehicle for technological transfer between countries. The ease or difficulty of setting up a business is increasingly recognised as having a major effect on economic development.

A5A Technology and industry

Technological change creates new fast-growing industries and transforms existing ones, providing the scope and the spur for major cost savings. For example:

Industry	Development
Mobile telecoms	In the 1990s mobile telecommunications was a new industry. This created a lucrative investment opportunity that was exploited by companies such as Nokia and Vodafone.
Telecoms (data messaging)	The fast growth of data messages across telecoms as a whole (including internet access), shows how an existing industry can be transformed by rapid technological change.
E-commerce	Technology has resulted in significant changes in retailing and wholesaling via the internet; the biggest bookseller in the world is now Amazon.com.

The successful incorporation of new technology into all aspects of an organisation's work, including product design, production processes, a product's technical features, the location of the business and its organisational structure, has led to those firms gaining a competitive advantage over their rivals.

B World economies and globalisation

International trade and the free movement of technology are creating a global economy in which consumers can buy goods from anywhere in the world. Also developing country producers can be assisted with capital and technology from the developed world. This is enhancing the growth of emerging economies and depressing the prospects of industries in the West that are exposed to competition from emerging markets.

International trade creates opportunities for emerging economies to sell their products across the world. This creates efficiencies for their industries and makes them raise their quality to global standards.

Direct investment by multinational companies in overseas markets has been a powerful driver of globalisation.

The effects of globalisation are that:

- investors can take advantage of globalisation by investing in foreign markets or by investing in the shares of multinational companies with large overseas operations; and
- it puts at a disadvantage low-skilled, labour intensive industries in the developed world that compete with developing countries.

B1 Political factors

When investing, the political, and therefore the economic, stability and viability of a country needs to be considered, as political and/or government actions or events could have an adverse effect on investment

markets. Such actions or events could include the following:

- significant changes in either taxing or spending policies could reduce activities in sectors that are important to particular businesses, which would reduce their profitability;
- war or major military conflicts could severely disrupt activities in the countries affected, as well as in nearby countries;
- terrorist attacks can undermine confidence, potentially causing a sharp drop in economic activity;
- the leadership of governments could change, or officials could be appointed whose policies interfere with investment growth.

Many countries have less political stability and less diverse economies than the UK, and investors need to consider how political and economic upheaval in a country could interfere with local investment markets and jeopardise investment growth.

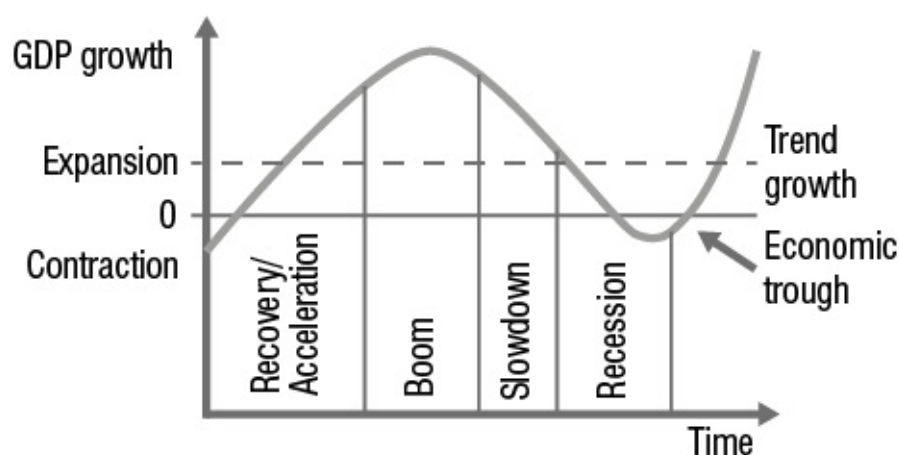
? **Question 2.2**
Which types of industries are at a disadvantage because of the effects of globalisation?

C Economic and financial cycles

Economies typically go through regular fluctuations in economic activity, called business cycles. Over the past 20 years, business cycles have lengthened and now appear to last around ten years. Within these cycles, there may be short-term fluctuations, often caused by changes in economic policy.

A business cycle can be divided into four main phases, although the economy does not always go through all of the phases.

Figure 2.2: Business cycle



The four main phases are:

- recovery followed by expansion or acceleration of economic growth;
- boom;
- slowdown or contraction; and
- recession.

In the expansion phase there is above average output growth and businesses experience record sales and profits. A strong customer demand justifies raising prices for many products. As prices and inflation continue to rise, the economy begins to ‘overheat’ and interest rates are increased to dampen demand and stop expansion. The period of boom occurs when the economy is growing at its fastest during the overall cycle.

As the economy starts to slow down, output growth slows – but inflation remains high – so the central bank is reluctant to cut interest rates. Sales start to drop as consumers become more cautious and spend less. Unemployment rises and some firms go out of business.

If the slowdown becomes severe enough it will result in recession. Output growth is sluggish and company profits weak; inflation and interest rates are falling. The economy will eventually reach its trough. If the trough is deep enough it is called a depression, typified by high levels of business failure and unemployment.

The recovery phase is where the economy moves out of recession, people start to spend more as they become more optimistic and confident about the future. Output growth accelerates as providers increase production and company profits rise, while inflation and interest rates remain low.

A business cycle is usually measured either from one peak of economic activity to another, or one trough to another.

Although cycles typically assume a recovery, acceleration, boom, overheating, deceleration and recession pattern, in practice it is difficult to identify exactly when one stage ends and another begins and, indeed, to quantify the duration of each stage.

Business cycles occur around trends in a country’s overall economic activity. This is measured by its GDP, which is calculated by adding together the total value of all goods and services produced domestically during a calendar year.

To understand where an economy is in the economic cycle, governments undertake significant efforts to measure the economic activity that is taking place. The most closely watched indicator of economic activity is GDP.

- When the level of GDP falls compared with the previous quarter, the economy is said to be contracting.
- Two successive quarters of declining GDP and it is said to be in recession.
- When GDP rises compared with the previous quarter, the economy is expanding.
- The peak of a cycle refers to the point of which GDP is at its highest level before it starts to fall.



Activity

Find out the current level of GDP growth at the Office for National Statistics (ONS) www.ons.gov.uk and consider the trend over the last twelve months.

A vital component of GDP is government spending on both current and capital expenditure. This is in part financed by the taxation of individuals and companies. The difference between the government’s expenditure and revenues is known as the **public sector net cash requirement (PSNCR)**. Typically, the UK Government has a borrowing requirement, as there is usually a deficit between expenditure and

receipts.

The PSNCR indicates the extent to which the public sector needs to borrow from other sectors of the economy and from overseas, in order to finance the difference between the expenditure and receipts arising from its various activities.

The state of public finances is in part dependent on the state of the country's economic activity:

- if the economy is in recession, tax revenues will be weak and spending on unemployment will rise, so that the PSNCR is likely to grow; and
- if the economy is expanding, tax revenues will rise and spending on unemployment will fall as more people find jobs, reducing the PSNCR deficit.

Interest rates tend to rise and fall in line with the level of economic activity.

- If an economy is slowing down, interest rates will be reduced to encourage borrowing to stimulate consumer demand and limit the risk of recession.
- In the subsequent expansion and boom they will be increased to slow down the economy, as a way of reducing inflationary pressures.

The economies of the world are all at different stages in their economic, business and investment cycles at any given time. However, the increasing globalisation of trade and investment activity means that changes in the economies of countries around the world, particularly the USA, will have an impact on the UK financial markets.

C1 Business cycles and investments

Fluctuations in the rate of economic growth create pronounced cycles in the prices of fixed-interest securities and equities.



Consider this...

What do you think is the impact of inflation (high and low) on the price of fixed-interest securities?

C1A Fixed-interest securities

When the economy is booming, people are prepared to pay more for goods and services. This pushes up prices, generating inflation and higher interest rates.

The yields from fixed-interest securities will need to be higher to compete with other investments, so their price will fall.

When inflation and interest rates are low and falling, the income from fixed-interest securities becomes more attractive. In a recession and the early stages of a recovery, the prices of fixed-interest securities should increase due to falling interest rates.

C1B Equities

The prices of equities in general rise and fall with the upturns and downturns of the economy. However, the speed and degree to which they individually respond to changes is varied:

- Typically, prices begin to pick up as the economy moves out of recession, and strengthen as the economy expands, when interest rates remain low and the operating environment for companies improves.
- They tend to falter in the boom as interest rates are raised to curb the expansion of the economy. However, the growing economy should offer companies some opportunities for enhanced profitability.
- They generally fall as the economy contracts due to higher interest rates and declining corporate earnings.
- Over the longer term, the prospects for corporate profitability tend to have more influence on the prices of equities than interest rates.

Government macroeconomic policy is often aimed at smoothing the economic cycle, easing the pain of recession and applying restraint when the economy is in danger of overheating.

This would typically be carried out through fiscal or monetary policy.

D Fiscal and monetary policy

D1 Fiscal policy

Fiscal policy is the use of government spending and taxation to influence both the level of demand in the economy and the level of economic activity.

- In a recession or times of low economic activity, the government may increase its spending or cut taxation to stimulate demand in the economy.
- In a boom, the government may reduce spending or increase taxation to dampen demand.

An increase in government spending, of say £1bn, has more impact on the economy than a decrease in income tax of the same amount. This is because the bulk of such an increase in expenditure will be spent on domestically produced goods and services.

In contrast, a larger part of the extra purchasing power from a cut in taxation will leak out of the economy in spending on imports, because tax cuts go to richer people who buy more imports; and part of a tax reduction is typically saved rather than spent.

Fiscal policy may affect the behaviour of both individuals and companies as follows:

Individual	Company
The different tax treatment of the various types of assets will influence investment decisions.	The tax treatment of a company's earnings will affect its dividend policy, and the choice of raising capital through debt or equities.

The imbalance between government spending and receipts results in either a budget deficit or surplus.

D2 Monetary policy

Monetary policy attempts to stabilise the economy by controlling interest rates and the supply of money. In the short term, changes in interest rates will have the most effect, while changes in expectations concerning future interest rates can also be important.

The Monetary Policy Committee (MPC) of the Bank of England has been responsible for setting short-term interest rates since May 1997. The principal rate used is the Bank of England base rate, essentially the rate at which eligible banks can borrow from the bank. However, London Inter Bank Offered Rate (LIBOR), the rate at which banks lend to each other, is a better guide to wholesale money market conditions.



Inflation target

Since December 2003 the MPC's aim has been to meet the UK Government's inflation target of 2%, based on the consumer prices index (CPI).



Activity

Look up the current rate of CPI and compare it with the Bank of England's target of 2%.

The Bank of England targets future rather than present inflation, as changes in interest rates have their maximum effect on inflation between eighteen months and two years after they are changed.

If the inflation target is missed by more than one percentage point on either side of 2%, the Governor of the Bank of England must write an open letter to the Chancellor explaining the reasons why inflation has increased or fallen to such an extent and what the Bank proposes to do to ensure inflation comes back to the target.

<p>Interest rate reductions</p>	<p>By reducing short-term interest rates, the Bank of England eases monetary policy.</p> <ul style="list-style-type: none"> • If the financial markets agree with the Bank's view of the prospects for inflation, longer-term rates should reduce. • This will lead to rising asset prices – from fixed-interest securities to property. This increase in wealth, together with lower interest rates, will make people more willing to borrow and spend which will increase expenditure and stimulate demand. • People dependent on an income arising from cash deposits will find themselves worse off. • Businesses will invest more since the margin between the return on investment and the cost of borrowing widens
<p>Interest rate increases</p>	<p>By increasing short-term interest rates, the Bank of England tightens monetary policy.</p> <ul style="list-style-type: none"> • This should raise longer-term interest rates. • This will lead to falling asset prices. The reduction in wealth, together with higher interest rates, will make people less willing to borrow, so reducing expenditure and stifling demand. • Businesses will invest less as they reduce their expectations of revenues and profitability.

The Bank has to be careful to give only subtle indications of where it wants future interest rates to go. Expectations, particularly those reached in the financial markets, can intensify the impact of monetary policy.

- The first reduction in interest rates after a period when they have been rising, may lead financial markets to anticipate further cuts. This will in itself tend to bring longer-term rates down further.
- Conversely, when the interest rate cycle turns upwards and rates rise after a period when they have been falling, financial markets tend to push longer-term rates up further.



Consider this...

If the markets consider that an easing in monetary policy is unwarranted and will fuel inflation, the change may have the opposite effect on longer-term interest rates, causing them to rise.



Question 2.3

How do you think the Bank of England creates money or reduces the supply of money?

E Money supply

Money supply is the quantity of money available within the economy to purchase goods and services. The amount of money in circulation in the economy provides information on the growth of the cash base in the economy, which provides an indicator of the strength of consumer demand.

The rate at which bank lending is increasing gives the MPC of the Bank of England an indication of the demand for credit at the prevailing rate of interest. As the demand for money is sensitive to interest rates, an increase in interest rates should reduce the demand for money, while a reduction in interest rates should increase it.

The most commonly quoted measures of money supply in the UK are M0 and M4:

M0:

- includes notes and coins in circulation, plus banks' operational deposits with the Bank of England;
- reflects, but does not cause, changes in the economic cycle – it has little effect on national output or inflation; and
- is an indicator of consumer spending and retail sales:
 - growth in M0 indicates that consumer spending is buoyant; and
 - a contraction in M0 suggests that consumers are behaving more cautiously.

M4:

- includes notes and coins in circulation, plus all instant access and time deposit accounts of UK residents with UK banks and building societies;
- includes deposits created by banks and building societies through their lending activities, as well as deposits lodged in accounts by people wanting to save; and
- as an indicator of the economy:
 - increased demand for loans is reflected in a faster growth of M4; and
 - rapid growth in money circulating in the economy is often interpreted as a build-up of

inflationary pressures.



Another name for M0

M0 is also known as 'narrow money'.



Another name for M4

M4 is also known as 'broad money'.

If the quantity of money is increased without a corresponding increase in the volume of goods and services that can be bought, the value of each unit of money will fall. There will be an excess of consumer demand over the supply of goods, which will force up the general level of prices, causing inflation. By reducing money supply, money will increase in value and so the prices of goods and services will reduce.

The Bank of England can influence the volume of money in circulation by selling and purchasing Treasury bills and Government stock on the open market. This works as follows:

- Selling securities reduces money supply by removing money from circulation and taking away excess purchasing power. This reduction in the supply of money will lead to higher short-term interest rates;
- Buying securities and paying for them by creating money has the opposite effect. It releases money into the economy, leading to lower short-term interest rates.

In practice, the Bank of England and other central banks use the repo market (the sale and repurchase market in Government bonds) to effect changes in interest rates.



Consider this...

Between 2009 and 2011 the Bank of England pumped £375 billion of assets into the economy through '**quantitative easing**'. This was a radical new policy of creating money to purchase Government gilts and corporate bonds in an attempt to increase the UK's money supply. The intention was to bring liquidity to the financial markets by increasing the lending capacity of the banks. This was expected to lead to an increase in spending that would stimulate the economy, which had stagnated despite the Bank of England cutting base rate to 0.5%. The introduction of new money into circulation is usually considered to be inflationary; however, the intended aim of this operation was that inflation would stay close to the Bank's target of 2%, rather than undershooting it.

The Bank of England estimates that the first round of quantitative easing boosted growth by around 1.5% to 2% and helped the UK avoid the worst of the recession. Growth and lending to business, however, remained sluggish which led to further rounds. The Bank estimates that the effect of the programme has been 'economically significant' but independent commentators remain uncertain.

The UK has not been alone in pursuing a policy of quantitative easing. The US has had a number of rounds of quantitative easing and the European Central Bank also resorted to quantitative easing when the sovereign debt crisis in Europe threatened economic stability.



Activity

Find out more about quantitative easing at www.bankofengland.co.uk.

E1 Inflation

Inflation is a major consideration for investors. Rising prices reduce the real value of future interest and

dividend payments, together with the real value of the original investment. Even over relatively short periods the cumulative effect of inflation can have a serious effect on the value of money.

There are a number of different measures of inflation. For many years, the retail prices index (RPI) was the UK's most familiar general-purpose measure of inflation. It measured the costs of goods and services purchased from month to month by most households in the UK. Its designation as a National Statistic has been cancelled, although the ONS still publishes the RPI each month.

From December 2003, the Chancellor of the Exchequer changed the main measure of inflation for macroeconomic purposes from RPI to the CPI. The CPI, which had previously been referred to as the Harmonised Index of Consumer Prices (HICP), is constructed in accordance with EU regulations so that reliable comparisons of inflation rates can be made across all EU Member States.

The CPI, like the RPI, measures the average change from month to month in the prices of consumer goods and services bought by consumers within the UK, but it differs from the RPI:

- in the households it represents;
- the range of goods and services included (e.g. unlike the RPI, the CPI does not include housing costs); and
- the way in which the index is constructed.

The RPI is still published alongside the CPI because it is still used as the measure of inflation for index-linked gilts.

CPIH – this is the most comprehensive measure of inflation as it includes owner occupiers' housing costs (OOH) along with council tax. Both of these are significant expenses for many households and are not included in the CPI. CPIH is not currently a National Statistic, but a number of requirements that need to be implemented for CPIH to regain its status are currently being worked on. You should ensure you keep up to date with developments.

People whose incomes are fixed in money terms suffer most from inflation, because a given sum of money will buy less than it used to if prices have risen. However, low inflation is generally good news for people in employment.



Average earnings trends

Average earnings in the UK have historically tended to increase faster than the CPI, so that the incomes of those with earned incomes should at least keep pace with inflation, and many would have actually benefited from inflation. However, according to the ONS, real wages (earnings when inflation is taken into account) fell in 2010, 2011 and 2012. At the time of writing, earnings growth remains weak with total pay increasing by 0.7% between the three months to January 2016 and the three months to January 2017 in real terms (adjusted for CPI).

E2 Disinflation

Disinflation occurs when there is a decrease in the rate of inflation. With disinflation, the prices of goods and services are still rising, but at a slower rate. Typically, this can occur during a recession, as sales drop, and retailers are not able to pass on higher prices to customers.

Disinflation should not be confused with deflation, which is an overall decrease in prices.

E3 Deflation

Deflation is the opposite of inflation and occurs as prices decline over time and the inflation rate becomes negative. If the supply of goods rises faster than the supply of money, the purchasing power of money increases and the general price level of goods will fall.

Consumers become reluctant to buy expensive items such as cars and homes because they know these will be cheaper in the future. Borrowers are committed to making loan repayments that represent more and more of their purchasing power, while at the same time the asset purchased with the loan is declining in nominal price.

If the prices of goods continue to fall then manufacturers will reduce output, because of difficulties in recovering the costs of production. This will lead to a reduction in profits.

- Once deflation occurs, it is self-perpetuating, as reduced output and profits will lead to businesses reducing their workforce, creating unemployment.
- This will lead to further reductions in sales, so that production has to be further reduced.

E4 Effects of inflation on investments

Although the UK has in the past experienced periods of price stability, an adviser needs to be aware of the effects of rising and falling inflation on the various types of asset.

E4A Cash deposits

Savings accounts that offer variable rates of interest tend to rise and fall in line with increases and decreases in the rate of inflation. If inflation is reducing, then interest rates will tend to fall as investors will not require such a high return to keep up with inflation.

Investors need to distinguish between **nominal interest rates**, that are actually paid or received by the individual, and **real interest rates**, which take inflation into account.

Interest rates on deposits can give a positive real rate of return if they exceed the rate of inflation.



Example 2.4

When the rate of inflation is 2.4% and interest rates are 4%, the approximate real rate of return is 1.6% (4% – 2.4%).

- Deposits have generally provided a positive return, thanks to low inflation, although the real return has been relatively low.
- There have however been periods when the rate of inflation has exceeded interest rates, providing a negative real return, even for non-taxpayers.

Inflation also has an effect on the value of the capital invested. If there is any inflation over the investment period, the real value of the capital will be eroded.

E5 Fixed-interest securities

Inflation is particularly significant for investors in fixed-interest securities:

- Investors receive the same fixed income whether prices rise or fall. The purchasing power of the income will fall by the rate of inflation, so a reduction in the rate of inflation will result in the investor being better off.
- Any inflation over the term of the security will also result in the real value of the fixed capital repayment at maturity being eroded.
- If there is an unexpected change in the expectations for inflation, there will be changes in the values of fixed-interest securities. Their prices tend to rise if expectations for inflation rates diminish, and fall if the rate of inflation is deemed to be speeding up.

Index-linked gilts have both income payments and redemption values adjusted in line with the rate of inflation, and can protect against inflation over the longer term. But their short-term value is driven by market sentiment and the inflation proofed redemption value is only guaranteed at redemption.



Redemption yields

In the UK, the redemption yields on index-linked gilts are used by investors to estimate the level of interest rates in the future.



Question 2.4

How and why do you think that expectations regarding inflation affect fixed-interest securities?

E5A Equities

Equities are usually seen as a good hedge against inflation because efficient companies will increase their profits in line with inflation.

- Rising company profits will lead to increasing dividends and/or growth in the capital value of shares.
- Historically, only equities have consistently grown in real terms.



Consider this...

Care should be taken to stress the long-term nature of equity investment. In the shorter term, equities can lose value, and there is no guarantee that any income will be paid.

E6 Interest rates

Interest rates play a key role in the real economy and in investment planning. In the UK, as in the Eurozone and the USA, the raising or lowering of short-term interest rates is the main tool used by central banks to control inflation, stimulate spending and encourage or discourage savings and investment in the economy.

Changes in interest rates have important effects on the economy and affect the relative attractiveness of different investments:

- Falling interest rates usually signal that the economy will expand in the medium term as a result of

the lower costs of borrowing.



Falling interest rates

In the UK, their effect in boosting output reaches its maximum after about 18 to 24 months.

- Demand for products and services rises because consumers and businesses can afford to borrow more to make purchases. Consumers find they have more disposable income, as interest payments on their borrowings are lower.
- Interest rate movements can be of critical importance in recommending appropriate investments for different clients.

E6A Cash

The return on cash-based investments will fluctuate broadly in line with the prevailing rate of interest. Falling interest rates will, however, make cash deposits less attractive to investors as they will be worse off. Investors may be tempted to switch to investments that are not suited to their risk profile.

E6B Fixed-interest securities

The relationship between the prices of fixed-interest securities and interest rates is an inverse one – as one goes down, the other goes up.

- Fixed-interest securities are in competition with other investments for investors' funds, and their yield, as a percentage of their market price, must remain competitive.
- As the income from a fixed-interest security remains unchanged throughout its life, the only way its yield can vary is through changes to its capital value.
- When interest rates rise, the price of fixed-interest securities fall so that the yield adjusts to reflect the higher general interest rates.
- When interest rates fall, the price will rise so that the yield reduces.

E6C Equities

Equities generally benefit from low interest rates, because company profits are usually higher as a result of the reduced cost of borrowing and higher demand for the company's goods and services.

- Increased profits might lead to an increase in the dividend paid to investors.
- Future dividend streams become more valuable and this pushes up share prices.

E6D Interest rates and inflation



UK Government policy

An adviser needs to be aware that the policy of the UK Government is firmly fixed on maintaining low inflation with correspondingly low interest rates.

Table 2.2 summarises the relationship between interest rates and inflation for the main classes of investments.

Table 2.2

	Interest rates		Inflation	
	Rising	Falling	Rising	Slowing
Cash – income	<p>Those with variable rate accounts benefit from greater returns.</p> <p>Existing fixed rate accounts become less attractive – better rates can be obtained elsewhere. However, exit penalties may make switching unbeneficial.</p>	<p>Those with fixed rate accounts benefit by maintaining their returns.</p> <p>Variable rate accounts become less attractive. It may be difficult to obtain better rates elsewhere.</p>	<p>Accounts that offer variable rates of interest tend to rise in line with increases in the rate of inflation.</p>	<p>If inflation is reducing then interest rates will tend to fall, as investors will not require such a high return to keep up with inflation.</p>
Cash – capital	N/a	N/a	<p>If inflation rises over the investment period, the real value of the capital will be eroded.</p>	<p>The real value of the capital takes longer to erode.</p>
Fixed-interest (bonds) – income	<p>Existing bonds become less attractive – newer bonds may be issued at higher rates.</p> <p>Interest yields rise as investors will not pay as much to purchase.</p>	<p>Existing bondholders benefit by maintaining their returns.</p> <p>Interest yields fall as investors are prepared to pay more for higher incomes.</p>	<p>The purchasing power of the fixed income falls.</p> <p>Interest yields rise as investors need to be compensated for the loss of real income.</p>	<p>The fixed-income investor is better off in real terms.</p> <p>Interest yields fall as investors are less concerned with inflation risk.</p>
Fixed-interest (bonds) – capital	<p>Capital values of existing bonds fall as the income they provide is unattractive in comparison with new issues.</p>	<p>Capital values of existing investments rise as the income they provide is attractive in relation to new issues.</p>	<p>Capital values tend to fall if the rate of inflation is deemed to be speeding up as fixed-interest investments become less attractive in general.</p>	<p>Capital values tend to rise as the rate of inflation slows as fixed-interest investments become more attractive in general.</p>
Equities	<p>Rising interest rates lead to higher debt servicing costs and lower demand as consumers struggle with higher mortgage payments. This can lead to lower profitability and smaller dividend payouts resulting in falling share prices.</p>	<p>Lower interest rates mean borrowing is cheaper for companies, and consumers have more disposable income. This can result in higher profits which can lead to an increase in dividends and rising share prices.</p>	<p>Equities are usually seen as a good hedge against inflation because efficient companies should increase their profits in line with inflation.</p>	<p>Company profitability slows, although over the longer term those who remain invested are still likely to see their returns exceed those of other asset classes.</p>

E7 Exchange rates

Trade between various countries involves the use of different currencies. The foreign exchange markets allow the currency used by one country to be purchased and paid for with the other country's currency.

- UK exports create a demand for sterling by foreign buyers and the satisfaction of this demand increases the supply of foreign currencies in the foreign exchange market; while
 - UK imports create a domestic demand for foreign currencies with which to pay for the imports and meeting this demand decreases the supplies of foreign currencies in the foreign exchange market.
- An exchange rate is the price at which two currencies trade on the foreign exchange market. For the UK, the dollar exchange rate means the number of dollars (\$) one pound (£) can buy.

Real exchange rates are the effective exchange rates between countries' currencies (the rates quoted daily on the currency markets) that have been adjusted to take account of differences in their rates of inflation. In other words, the real exchange rate measures the price of domestically produced goods relative to the price of foreign goods, taking into account the exchange rate.

The real exchange rate is a good indicator of a country's competitiveness. If the real exchange rate rises, domestic goods become more expensive relative to foreign goods, adversely affecting domestic production. If the real exchange rate falls, however, then domestic goods become relatively cheaper and so demand for them increases.

Exchange rates can be fixed to one another at rates set by the government, or there can be a floating exchange rate regime, where currency exchange rates are determined by the foreign exchange markets and are based on the supply and demand for currencies. In the UK, the exchange rate has floated since September 1992, when Britain left the European Exchange Rate Mechanism (ERM). Most developed nations use floating exchange rates, but developing economies usually attempt to manage capital flows using either fixed exchange rates or capital controls or both.



Question 2.5

What do you think are the benefits or otherwise of a strong currency?

There is an important link between a country's economic performance, interest rates and currency values, although the exchange rate is essentially a price at which different currencies trade on the basis of their supply and demand. The value of a currency is partially determined by the health of the national economy, especially the balance of payments current account. For instance:

- If there is a surplus on the current account, i.e. a country exports more goods and services than it imports, then buyers must acquire the currency to pay for the goods. This adds to the country's foreign reserves and strengthens the currency. If the pound strengthens against the dollar, the number of dollars that one pound would buy will increase. There will be a decrease in the price paid for dollars.
- Conversely, a current account deficit implies the need to sell the local currency in order to acquire foreign goods. This would lead to a change in the demand for that currency, which would cause a change in the exchange rate, with the currency weakening in value. If the pound weakens against the dollar, the number of dollars one pound would purchase will decrease. There will be an increase in the price paid for dollars.

A strong currency can have beneficial effects, such as reducing the cost of imported goods.



Consider this...

In a country like the UK, which imports much of the raw materials that it needs, the lower cost of imports helps keep domestic inflation down. Conversely, a weak pound means higher import costs and faster rising prices.

- However, if a currency becomes too strong, it can wreak havoc with the domestic economy.
 - a higher currency value will make exports more expensive, weakening the country's competitive position and potentially reducing exporters' profits; and
 - manufacturers find that their products become too expensive to compete with those of other countries in both export and home markets, so domestic manufacturers suffer.
- Foreign investment into a country also has an influence on currency value. Successful countries that run a current account balance of payments surplus (sell more goods and services to other countries than they buy from abroad) and which keep inflation at a low level, will usually see their own currency strong or rising in value over time.



Example 2.5

If a US manufacturer wanted to set up a new factory in the UK, they would need pounds to purchase land and develop the site. The company would need to sell dollars and buy pounds in the foreign exchange markets. The supply of dollars would increase and the supply of pounds would go down, which in turn would cause the pound to appreciate and the dollar to weaken.

Foreign investment does not have to be in tangible goods such as land, as an investment in the UK stock market by US investors would lead to the same situation.

Foreign investors may also be attracted if interest rates are higher than those paid in other currencies.

- If US bonds had a higher interest rate than UK bonds, investors would be more interested in purchasing US bonds and less interested in purchasing UK bonds.
- To purchase US bonds they would need to buy dollars on the foreign exchange market, causing a reduction in the supply of dollars and a rise in their value relative to other currencies, such as the pound.
- If UK investors were buying US bonds, they would need to sell pounds, which would lead to an increase in the supply of pounds and a decline in their value.

Changes in exchange rates have a direct impact on the value of investments in overseas securities, and also affect the profitability of domestic businesses. In the past, the current account (the trade balance) was regarded as significant in relation to exchange rates, but today, flows of capital (often ten times greater than trade flows) are seen as the major factor affecting exchange rates.

E7A Effect on foreign investments

Exchange rates also have an impact on investment returns. When interest rates on foreign investments are higher than on domestic products, overseas investments appear more attractive. However, if exchange rates are not favourable, then any profit may be lost when the money is exchanged into sterling.

E7B Effect on domestic shares

Movements in the pound have two main effects on domestic shares, as follows:

--	--	--

Indicator	Rise in the pound	Fall in the pound
Profitability of exports	Reduces	Increases
Share price of major exporters	Marked down	Rise
Value of profits earned overseas by UK companies when translated into sterling-based profits	Cut (dollars earned in the USA, for example, will buy fewer pounds if the pound strengthens)	Increases
Firms benefiting	Firms that rely on a substantial level of imports, for example raw materials or components	Exporters

F Balance of payments

The balance of payments for a country is a record of the country's trade transactions with the rest of the world, measured in terms of **receipts and payments**:

- a receipt represents sterling flowing into the country, or any transaction that requires the exchange of foreign currency for sterling; and
- a payment represents sterling flowing out of the country, or any transaction that requires the conversion of sterling into some other currency.

The balance of payments can have important consequences for exchange and interest rates, and therefore can impact on the economic growth of a country. A country with a surplus is accumulating money within the economy. How this money is spent is an important indicator of the financial strength of a country on a global basis.

The balance of payments consists of two offsetting components:

- **current account**, which deals with imports and exports of goods and services; and
- **capital account**, which deals with foreign investments in the UK and UK investment abroad, as well as loans.

Bringing together the current account and the capital account provides a complete statement of the UK's trade and financial transactions with the rest of the world.

F1 Current account

The current account consists of transactions in goods (visible trade) and services (invisible trade).

- **Visible trade** includes exports and imports of goods such as oil, agricultural products, other raw materials, machinery and transport equipment, computers, white goods and clothing.
- **Invisible trade** includes exports and imports of services such as international transport, travel,

tourism, financial and business services.

The current account divides into four parts, each of which comprises flows of income in and out of the country (see Table 2.3).

Table 2.3: The current account

Trade in goods	The exports and imports of products, ranging from commodities to manufactured products.
Trade in services	The exports and imports of services, such as tourism, transport and banking.
Investment income	Comprises the earnings on investments held by Britons overseas (which credit the balance of payments) and the earnings on investments held by foreigners in Britain (which debit the balance of payments).
Transfer payments	Items such as overseas aid or payments to and from EU institutions.



Current account balance

A country's current account balance is the net balance of trade in both goods and services, plus net receipts from income generating assets flowing into the UK from overseas countries.

- A deficit on the current account means that more goods and services have been imported into the UK than have been sold abroad; and
- a surplus on the current account means that more goods and services have been exported than imported.

For many years the UK has imported more goods than it has exported, which has resulted in a **trade gap**. This need not cause particular concern if it is offset by surpluses elsewhere on the balance of payments, such as invisible items.

However, a persistent deficit puts pressure on the country's currency, encouraging devaluation to increase price competitiveness of exports and decrease that of imports.



Reinforce

Can you recall the list of 'invisible trade' items? Why not make a note of them before you proceed?

F2 Capital account

The capital account of a country's balance of payments records all movement of money into and out of the country for investment. This may be investment in real assets, such as land and buildings, or financial assets, such as shares, bonds and loans. This works as follows:

- sales of assets earn foreign currencies, while purchases use up foreign currencies;
- the UK has a capital account surplus if overseas investors invest more money in the country than UK investors invest overseas.

Any deficit on the current account balance must be made up by the capital account in the overall balance of payments through net investment into the country or loans from abroad. If there is a net deficit on the combined current and capital accounts the official reserves, which consist of foreign currencies owned by

the Bank of England, will have to be used to finance it.

G Role of financial investment in the economy

Financial investment has a major impact on a country's economic development. This is because it will stimulate demand by contributing to aggregate demand, and improve productivity through the introduction of the most up-to-date production technologies and methods.

Investing in industrial plant and machinery, social infrastructure, research and development, as well as in human potential through education and training requires current output to be diverted from consumption. A portion of national income must be saved and devoted to expenditures that will only pay-off in future.

In any market economy, well-functioning financial institutions and markets, such as commercial and investment banks and stock exchanges, play a central role in moving funds from where they are available to where they can be best used.

G1 Primary and secondary markets

The principal capital market that exists for buyers and sellers of fixed-interest securities and shares in the UK is the London Stock Exchange. The London Stock Exchange serves two purposes:

- **primary market**, which has facilities for companies, governments and other organisations to issue new securities to raise money; and
- **secondary market**, which has the means for investors to buy and sell securities that have already been issued.

The buying and selling in the secondary market does not affect the finances of companies or the Government. There is, however, a close relationship between the two markets, as follows:

- without the primary market, the secondary market would be deprived of a stream of quality new stock; but
- without the secondary market, investors would be reluctant to subscribe to new issues in the primary market, as they would be unable to easily dispose of those securities if necessary.

It is the secondary market in shares that has promoted the acceptability of investment in the equity share capital of public companies. This in turn has helped to fuel the growth of the UK economy.



Key points

The main ideas covered by this chapter can be summarised as follows:

Trends in investment markets
<ul style="list-style-type: none">• Governments can influence economic and financial conditions such as interest rates, currency alignments, inflation and economic

cycles, which can impact on investment markets.

- Political and other developments can have long-term effects on investment markets.
- People are living longer, which leads not only to more retirees, but also to higher average wealth holdings.
- Technological change is a key determinant of higher productivity and has had an impact on all aspects of an organisation's work, with firms that have successfully incorporated technology gaining a competitive edge over their rivals.

World economies and globalisation

- Globalisation is leading to rapid economic growth in many developing countries, and this is creating new but risky opportunities for investors.

Economic and financial cycles

- Economies go through business cycles, fluctuations in the level of activity, which in turn generate cycles in investment markets.

Fiscal and monetary policy

- Fiscal and monetary policies are in theory used to smooth the economic cycle, and in practice used to respond to crises and market developments.

Money supply

- Changes in money supply provide an indication of the strength of consumer demand and determine short-term interest rates.
- Inflation is a major consideration for investors because rising prices erode the value of savings. Changes in expectations can alter the course of the economy. Investors need to consider the real rate of return on an investment by taking inflation into account.
- Interest rates affect the relative attractiveness of different investments.
- The exchange rate is essentially a price at which different currencies trade on the basis of supply and demand for them.
- The value of the pound affects the profitability of exporting companies and the returns made in overseas markets by domestic investors.

Balance of payments

- The balance of payments provides a statement of a country's trade and financial transactions with the rest of the world.

Role of financial investment in the economy

- A stable and well-functioning financial system can contribute positively to investment, economic growth and employment.



Question answers

- 2.1 Financial bubbles are often associated with a genuine technological breakthrough, like railways in the 19th century or the internet at the end of the 20th century. Typically, investors overestimate potential returns and underestimate competitive pressures. The bubble swells as more and more investors are lured into buying equities because they have risen rather than because they offer reasonable value.
- 2.2 Low-skilled, labour-intensive industries in the developed world that compete with developing countries.
- 2.3 The Bank of England can create money by buying Government securities; it can reduce the money supply by selling Government securities.
- 2.4 If inflation is expected to diminish then the price of fixed-interest securities will rise. If inflation is expected to speed up then their price will fall.
- 2.5 A strong currency reduces the cost of imported goods – useful in a country like Britain that imports much of its raw materials. The lower cost of imports helps to keep domestic inflation down.

However, it makes exports more expensive, reducing a country's competitiveness and its exporters' profits. Products are more expensive and so less competitive compared with those from elsewhere, both at home and abroad, and this damages domestic manufacturers.



Self-test questions

- | | |
|----|---|
| 1. | Why should investors pay attention to political developments? |
| 2. | Why are international developments increasingly important for investors? |
| 3. | What are the four main phases of the business cycle? |
| 4. | How can the business cycle affect the stock market? |
| 5. | How may a government's fiscal policy affect the behaviour of individuals and companies? |
| 6. | What are the two main measures of money supply, and what do they comprise? |
| | |

7.	What are the effects when the Bank of England reduces short-term interest rates?
8.	How does a country's balance of payments current account affect currency values?
9.	How do exchange rates impact on investments in the domestic and foreign markets?

You will find the answers at the back of the book

3 The merits and limitations of the main investment theories

Contents	Syllabus learning outcomes
Learning objectives	
Introduction	
Key terms	
A Modern portfolio theory	3.1, 3.2*
B Capital asset pricing model (CAPM)	3.1
C Multi-factor models	3.1
D Efficient market hypothesis (EMH)	3.1
E Behavioural finance	3.3
Key points	
Question answers	
Self-test questions	
*see also chapter 9, section B2	

Learning objectives

After studying this chapter, you should be able to:

- discuss the merits and limitations of the main investment theories;

- describe the principles of investment risk, including standard deviation, systematic and non-systematic risk;
- explain the principle of risk reduction through diversification;
- outline the principles of the capital asset pricing model (CAPM) and its limitations;
- describe how multi-factor models can be used to forecast security returns;
- explain the implications and limitations of the efficient market hypothesis (EMH); and
- discuss how behavioural finance helps explain market and investor behaviour.

Introduction

In this chapter we examine the merits and limitations of the main investment theories, looking at modern portfolio theory, the capital asset pricing model (CAPM), multi-factor models and how these theories consider the balancing of risk and return. We then turn to the efficient market hypothesis and finish with an introduction to behavioural finance.



Key terms

This chapter features explanations of the following:

Arbitrage pricing theory (APT)	Beta	Behavioural finance	Capital asset pricing model (CAPM)
Correlation	Diversification	Efficient frontier	Efficient market hypothesis
Fama and French model	Hedging	Modern portfolio theory	Multi-factor models
Non-systematic or investment-specific risk	Prospect theory/loss aversion	Standard deviation	Systematic or market risk

A Modern portfolio theory

Modern portfolio theory (MPT) is concerned with the way in which portfolios can be constructed to maximise returns and minimise risks. According to this theory we cannot simply consider the potential risks and returns of an individual investment; it is important to consider how each investment changes in price relative to the other investments in the portfolio.

Essential to portfolio theory is the assumption that investors are risk averse and would choose a less risky investment if they were offered the choice of two that offered the same return. The higher risk investment would only be chosen if it offered a higher return. The implication is that a rational investor would not invest in a portfolio if an alternative portfolio existed with a more favourable risk-return profile.

The foundations of modern portfolio theory were laid down by Professor Harry Markowitz in 1952, when he demonstrated that portfolio diversification could reduce risk and increase returns for investors. The conclusion is that a diversified portfolio of imperfectly correlated asset classes can provide high returns with the least amount of volatility.

A1 Risk

The most commonly used measure of risk is the volatility of returns which is called the **standard deviation** of returns.



Standard deviation

Standard deviation measures how widely the actual return on an investment varies around its average or expected return. The greater the standard deviation, the greater the volatility and therefore the associated risk.

- An investment with returns staying close to its expected return is said to be low risk and has a low standard deviation.
- An investment with returns fluctuating wildly may have the same expected return, but is described as high risk. It has a higher standard deviation of returns.
- The greater the standard deviation around the expected return, the more volatile and hence risky the investment.



Designation for standard deviation

The standard deviation is usually designated by the Greek letter sigma, σ .

The standard deviation is calculated by considering the differences between the average or mean return and actual returns, based on past experience. It is a useful tool to identify the range of returns investments are likely to generate in the future.

As a rough rule of thumb, the return can be expected to fall within one standard deviation of the average return 68% of the time and within two standard deviations 95% of the time when the data is normally distributed – as shown in figure 3.1.

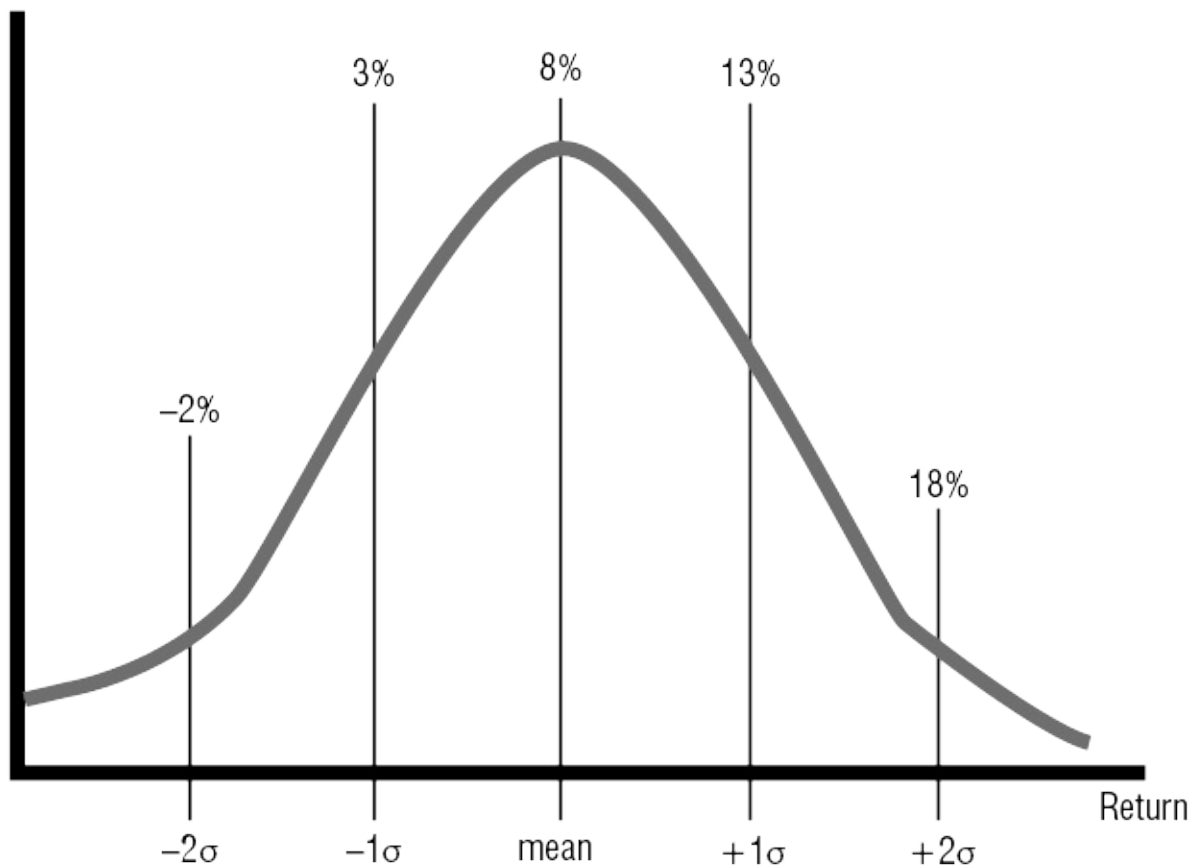
For example, if the mean is 8% and the standard deviation is 5%:

- roughly 68% of returns or events will fall between 3% and 13% (i.e. $8\% \pm 5\%$); and
- roughly 95% of returns will fall between -2% and 18% (i.e. $8\% \pm 2 \times 5\%$).

Standard deviation is an acceptable measure of risk if the distribution of returns forms what is called a normal distribution. This means that the distribution of expected returns is spread symmetrically around the mean in a bell shaped distribution. Investment theory often assumes this to be the case and standard deviation is generally accepted as a suitable measurement of risk.

Figure 3.1: Standard deviation

Frequency



Question 3.1

If the returns from a market are normally distributed and the average return is 10% per annum with a standard deviation of 10%, approximately what percentage of returns will be negative?

You should note that recent research has discovered that financial data is not always symmetrically spread around the mean, it can be skewed which means it is lopsided with a long tail on one side, or it can exhibit fat tails (called excess kurtosis). This increases the probability of extreme events.

A2 Reduction of risk

One way to construct a low-risk portfolio is simply to buy low-risk assets, but this will usually lead to low returns. A more attractive way is to buy risky assets, which on average will give higher returns and then reduce the risk in one of two ways:

- either by **diversification of the portfolio holdings**; or
- more specifically by **hedging out risk**.

A2A Hedging

Hedging means protecting an existing investment position by taking another position that will increase in value if the existing position falls in value. One way that this can be achieved is by using derivatives.



Example 3.1

The value of a portfolio of UK equities can be hedged by:

- selling FTSE 100 futures contracts; or
- buying FTSE 100 put options.

A2B Diversification of risk

Investors can reduce the risk on their portfolio by holding a range of different types of assets. Each type of investment tends to perform well in certain market conditions, and by broadening the portfolio's exposure across a range of asset classes the fluctuations caused by most economic and financial events can be smoothed out.



Diversification

It is clearly riskier to invest in a single security than in a collection of securities. When a portfolio is made of a number of securities, the problems associated with one particular security will not have such a major impact on the overall value of the portfolio:

- Diversification reduces risk because combining different asset classes or securities in a portfolio reduces the overall risk to less than the average risk of the individual securities. The downside risk of one investment would be offset by the upside potential of another investment.
- This offsetting would not occur if the investments all moved in the same direction at the same time. Diversification is effective where individual stock movements take place in opposite directions.

You should note that diversification within a portfolio can remove stock specific risk but not market risk.

A2C Correlation

The effectiveness of diversification depends on the degree of correlation, or covariance, between the returns on investments within the portfolio. Correlation is a number between +1 and -1.

Positive correlation

The profits and share values of many companies move up and down together. They are affected by the same things: for example, the overall level of consumer demand or interest rates and the overall market performance.

Negative correlation

The profits of some companies move in opposite directions and therefore have negative correlation. For example, companies with a substantial level of imports may benefit from a rise in the value of sterling, while exporters may be hit by the same factor and will need to cut margins to sell the same volumes. The share prices of such companies may or may not be negatively correlated; this is because most shares, if anything, tend to move in the same direction as the market.

No correlation

The profits and share values of some companies are not related to each other in any way. For example, there is probably little or no correlation between UK retailers and Japanese banks unless they are both affected by the same world events.



Example 3.2

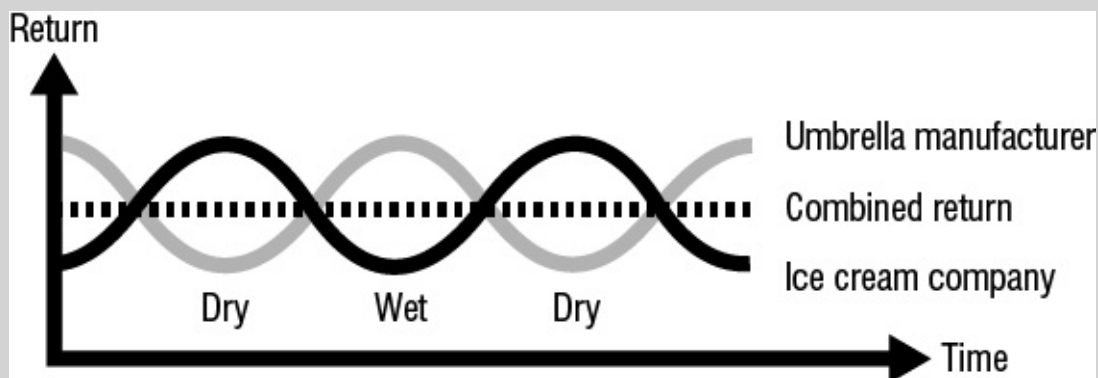
Correlation of returns

Suppose an investor buys shares in two companies, an ice cream manufacturer and an umbrella manufacturer. Like all

businesses, these two companies have risky returns in that their profits vary from year to year. For the sake of this example, we will assume that the profits of the two companies are only affected by the weather and nothing else. In particular, the weather affects profitability in opposite ways:

- In good weather the demand for ice cream increases and the profits of the ice cream manufacturer rise, but in bad weather the demand for ice cream would fall.
- In contrast, in bad weather the demand for umbrellas increases and the profits of the umbrella manufacturer rise, but in good weather demand for umbrellas would fall.
- One prospers when the other does badly.

By investing equally in both companies, the variability of their returns is reduced or eliminated, because they are affected by changes in their environment in opposite ways. The risk has been diversified away because the returns are negatively correlated.



The most effective diversification comes from combining investments that are negatively correlated, but these investments are not always easy to find.



Diversification in practice

In practice investors may have to choose investments that are not correlated or where the correlation is as low as possible.

Diversification can additionally be achieved by:

- **Holding different asset classes within a portfolio.** Not all assets respond in the same way to changes in the economic cycle. As a general rule:
 - equities are more likely to do well as the economy grows;
 - fixed-interest securities tend to outperform equities as recession looms;
 - residential property values are related to people's real earnings, although in the previous downturn property prices generally fell in line with equities.
- **Choosing companies from different sectors.** Diversification within sectors is limited, however, as most shares move up and down in line with the sector as a whole.
- **Including overseas companies.** In order to provide a greater diversification, it might be beneficial for some clients to invest in non-domestic markets.

A3 The efficient frontier

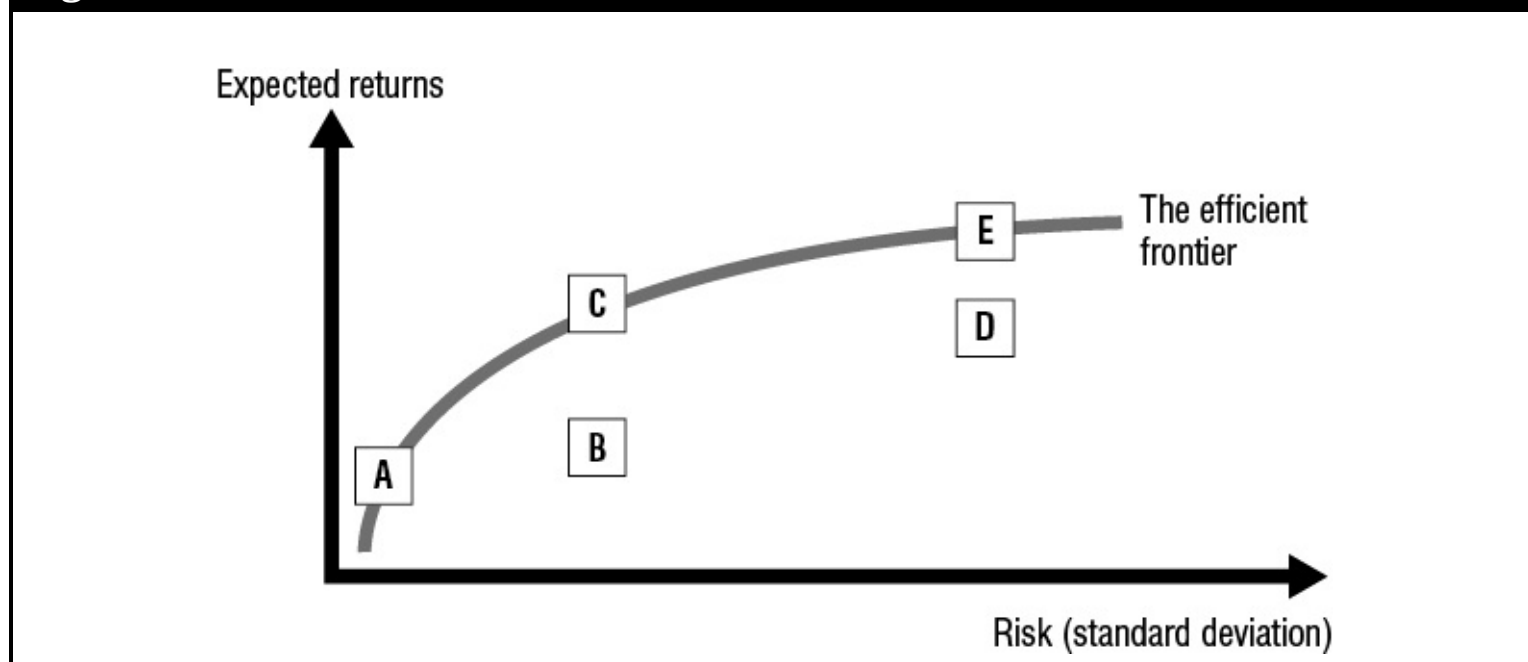
A key concept of modern portfolio theory is the **efficient frontier**, which describes the relationship between the return that can be expected from a portfolio and the risk of the portfolio as measured by the standard deviation.

The efficient frontier plots the risk-reward profiles of various portfolios and shows the best return that can be expected for a given level of risk, or the lowest level of risk needed to achieve a given expected

return. The inputs to the models are the:

- return of each asset;
- standard deviation of each asset's returns; and
- correlation between each pair of assets' returns.

Figure 3.2: The efficient frontier



What we can say about the five different portfolios represented in the graph is:

Comparison	Observation
Portfolio A v portfolio B	Portfolio A is a better choice because it offers the same return as portfolio B, but at a lower level of risk.
Portfolio B v portfolio C	Portfolio C is a better choice because it offers a higher return for the same level of risk as portfolio B.
Portfolio C v portfolio D	Portfolio C is a better choice because it offers the same return as portfolio D, but at a lower level of risk.
Portfolio D v portfolio E	Portfolio E is a better choice because it offers a higher return for the same level of risk as portfolio D.
Portfolio A v portfolio C v portfolio E	It is difficult to choose between these portfolios. Portfolio A offers a low risk, low return strategy, while both portfolios C and E offer higher levels of risk but with higher returns. The portfolio selected will depend on the risk preference of the individual investor.

The efficient frontier represents the set of portfolios that have the maximum rate of returns for every given level of risk, with each portfolio lying on the efficient frontier offering the highest expected return relative to all other portfolios of comparable risk. A rational investor will only ever hold a portfolio that lies somewhere on the efficient frontier; however, it is not possible to say which portfolio an individual investor would prefer, as this is determined by the maximum level of risk that the investor is prepared to take.



Objective of portfolio management

The objective of portfolio management is to find the optimal portfolio for an investor. The more risk averse an investor is, the lower the optimum portfolio on the risk-reward spectrum will be, as defined by the efficient frontier.

A3A Limitations to using an efficient frontier

The limitations to using an efficient frontier include:

- It assumes standard deviation is the correct measure of risk and assumes assets have normally distributed returns.
- It is difficult to say which portfolio investors would prefer based solely on their attitude to risk, as investors may be concerned about other factors in addition to risk and have constraints on how their portfolio is invested.
- Inputs for risk and correlation between assets often rely on historical data, which may not be stable. Correlations usually rise in a financial crisis meaning that less risk will be diversified away than indicated by the model.
- The model does not include transaction costs and investors may not be willing to change their portfolios as often as the model might recommend.
- It assumes that the underlying portfolios in each asset class are index funds with the same characteristics as the input data.

A4 Systematic and non-systematic risk

MPT suggests that the variance for individual security returns has two components: systematic and non-systematic risk.

Systematic risk or market risk

This is risk that affects the markets as a whole and cannot be avoided. It is the risk that markets generally will go up and down as a result of news or events. For example:

- changes in interest rates, inflation or other economic factors;
- tax changes made by the government; and
- terrorist attacks or wars.

Some securities will be more sensitive to market factors than others and will have a higher systematic or market risk.

Systematic risk

This type of risk is measured by beta, which indicates the volatility of a stock relative to the market (see [section B1](#)).



Non-systematic risk or investment-specific risk

This is risk that is unique to a particular company, and relates to unexpected pieces of good or bad news concerning the company. It is independent of economic, political and other factors that affect share prices in a systematic way. Examples of non-systematic risk are:

- a new competitor begins making essentially the same product;
- technological breakthrough makes an existing product obsolete; or
- a change in a company's credit rating.



Non-systematic risk

This is risk that can be eliminated by holding a diversified portfolio.

While all shares have a similar exposure to market risk, investment-specific risk will vary from company to company. Therefore, it is unlikely that the prices on all shares will move in exactly the same way at the same time. This means that in a portfolio containing a diversified range of shares it is likely that as some of the prices are falling, the prices of others will be stable or rising. The result is a steadier overall return when a portfolio of shares is held, with the losses on one being cancelled out by gains on another.



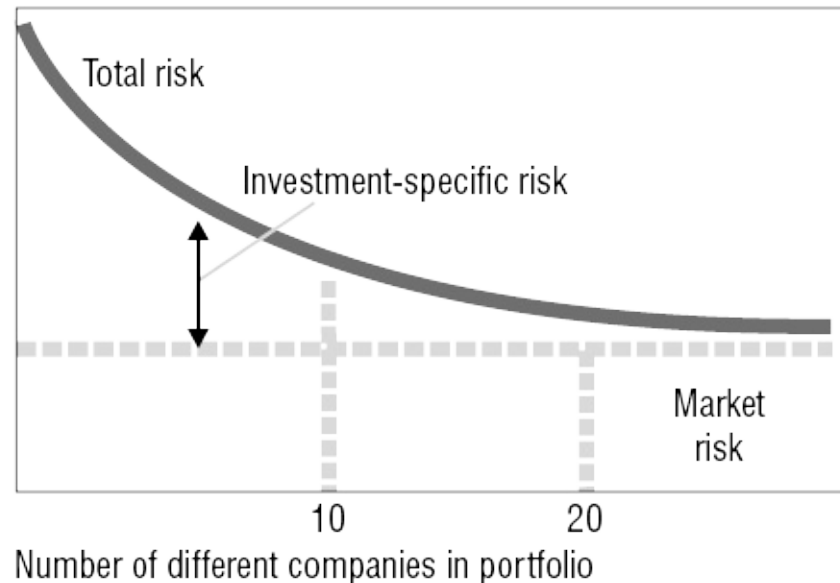
Consider this...

No matter how many securities are held in a portfolio, the systematic (market risk) remains.

The risk reduces as the number of securities in a portfolio rises. Various academic studies suggest that 15 to 20 securities selected randomly are sufficient to eliminate most of the investment-specific risk in a portfolio. However, as Figure 3.3 shows, the rate of reduction diminishes as more securities are added. This is because, although the specific risk relating to the individual securities can be diversified away, the risk relating to the market remains.

Figure 3.3: Portfolio risk reduction

Risk of portfolio
(standard deviation of return)



Activity

Compare the systematic and non-systematic risks that affect share prices with those we looked at in [chapter 2](#) that affect bond prices. What conclusions can you draw?

B Capital asset pricing model (CAPM)

The concept of MPT derives a relationship between the risk and return of financial assets. To invest in a risky asset, an investor would require a return that is equal to the risk-free return plus a risk premium for taking on the additional risk of that asset.

As we saw in the last section, the total risk of a security can be divided between systematic or market risk and non-systematic or investment specific risk. The non-systematic risk relates to risks that are unique to the security and which can be diversified away as increasing numbers of securities are added to a portfolio. However, no matter how many securities are held in the portfolio, systematic risk remains. Some securities are more sensitive to market factors than others and will therefore have a higher systematic or market risk, while others will not be as sensitive and will have a lower systematic risk.

CAPM says that because non-systematic risk can be eliminated by diversification, it is not rewarded. It is the sensitivity of the security to the market that is the appropriate measure of risk.



Sensitivity of the security relative to the market

This sensitivity of a security relative to the market is expressed in terms of its beta β .

B1 Beta

By definition, the market has a beta of 1, and the beta of an individual security reflects the extent to which the security's return moves up or down with the market. According to CAPM:

- A security with a beta equal to 1 is expected to move up and down exactly with the market.

Therefore, if the market moves by 10%, the security's price will be expected to also move by 10%.

- A security with a beta of more than 1 exaggerates market movement, and is more volatile than the market. If the market goes up, the security will go up more (how much more depends on its beta). If the market goes down, the security will go down more. Such securities are often referred to as aggressive securities.
- A security with a beta of less than 1 and more than zero is usually more stable than the market (unless it has a high level of specific risk), and will move less than the market but in the same direction. These securities are often referred to as defensive securities.



Activity

Compare the current betas for different stocks in the UK market. Which sectors have low betas and which have high betas?

B2 CAPM equation

The CAPM is a model that derives the theoretical expected return for a security as a combination of the return on a risk-free asset and compensation for holding a risky asset, i.e. a risk premium.

The CAPM is usually expressed:

$$E(R_i) = R_f + \beta_i (R_m - R_f)$$

Where $E(R_i)$ is the expected return on the risky investment.

R_f is the rate of return on a risk-free asset.

R_m is the expected return of the market portfolio, and

β_i is the measure of sensitivity of the investment to movements in the overall market.

$(R_m - R_f)$ is the market risk premium, the excess return of the market over the risk-free rate.

$\beta_i (R_m - R_f)$ is the risk premium of the risky investment.



Consider this...

The CAPM provides the relationship between a security's systematic risk and its expected return, so that securities with high levels of systematic risk (high betas) can be expected to provide high returns in a rising market.



Example 3.3

The expected return according to the CAPM

The expected rate of return for a security is equal to the return on a risk-free investment plus a risk premium.

Calculate the expected return from Pro-power plc using the following assumptions:

- The expected return on a Treasury bill is 3%;
- The expected return on the market portfolio is 7%; and
- Pro-power plc has a beta of 1.3.

From this information, using the CAPM formula, we find the expected return for Pro-power would be:

$$\begin{aligned}
 E(R_i) &= 3 + 1.3(7 - 3) \\
 &= 3 + 5.2 \\
 &= 8.2\%
 \end{aligned}$$

This tells us that on average, the market expects Pro-power to show an 8.2% annual return. Because Pro-power has more systematic risk than a typical security in the market, its expected return is higher.

If we now consider a defensive security, Safe Services plc, with a beta of 0.8. Its expected return would be:

$$\begin{aligned}
 E(R_i) &= 3 + 0.8(7 - 3) \\
 &= 3 + 3.2 \\
 &= 6.2\%
 \end{aligned}$$

Because this security has less systematic risk than a typical security in the market, its expected return is less.



Question 3.2

What is the expected return for Southern Research if it has a beta of 1.4, if the expected return on a Treasury bill is 3.5% and the expected return on the market portfolio is 8%?

B3 Assumptions for the CAPM

The CAPM is based on a set of assumptions which include:

- Investors are rational and risk averse, making decisions on the basis of risk and return alone.
- All investors have an identical holding period.
- The market comprises many buyers and many sellers and no one individual can affect the market price.
- There are no taxes, no transaction costs and no restrictions on short selling.
- Information is free and is simultaneously available to all investors.
- All investors can borrow and lend unlimited amounts of money at the risk-free rate.
- The quantity of risky securities in the market is fixed, and all are fully marketable (this means the liquidity of an asset can be ignored).



Validity of these CAPM assumptions

Some of these assumptions are more valid than others. However, what matters is not how realistic or reasonable the assumptions are, but how well the model helps us to understand, explain and predict the expected return on an investment with a particular level of risk.

B4 Limitations of the CAPM

In addition to the assumptions made by the CAPM, there are other limitations. These are listed below:

What to use as the risk-free rate?

Finding a totally risk-free return is difficult. Common practice is to pick the return on UK Government Treasury bills as a representation of a risk-free asset. These are 91-day money market instruments issued by the UK Government; there is virtually no default risk and, because of their short life, the interest rate and inflation risks are minimal.

What is the market portfolio?

In theory, the CAPM market portfolio includes all risky investments worldwide, while in practice this is usually replaced by a market index of shares relating to a particular national share market, e.g. the FTSE All-Share or FTSE 100. However, depending on which index is used, the betas are significantly different. This has brought into question whether these indices represent the true market portfolio, since if the true market portfolio is not used, the correct beta for a security cannot be determined.

The suitability of beta

In order for the CAPM to be useful, the beta of a security must be stable or predictable. Betas are calculated from past experience and do not seem to be stable over time, which brings into question their reliability as a guide to estimating future risk.

The CAPM suggests a direct relationship between the excess return on a security over the risk-free rate and its beta, but some studies, particularly in the USA, have not found this relationship. There does, however, appear to be more support for the model over longer periods of time, with some studies seeming to imply that low beta securities earn more than the CAPM would predict, while high beta securities earn less.

Despite this, the CAPM is the foundation of many risk-adjusted measures of investment performance. The fact that the model has been criticised because its assumptions are unrealistic (there are some studies that show the market does not perform as the theory suggests) does not invalidate its ability to provide relative data that illustrates expected returns and their relationship to risk.



Consider this...

It can be viewed as a flawed ruler – just because the scale is wrong, it can still be used to evaluate whether one line is longer than another.

C Multi-factor models

The CAPM expresses a simple relationship between risk and return. It indicates the expected return on a security as the return on a risk-free asset, plus a risk premium. This risk premium is simply determined by the level of the security's systematic (non-diversifiable) risk relative to the average level of systematic risk on a stock market. Hence the model is often referred to as a **single factor model** – it is concerned with only one factor, the security's sensitivity to the market, as measured by its beta.

However, as we have seen, there are some problems with this theory. The relationship between risk and

return can be far too complex to describe by the relationship with a single market index, as other factors may also determine the return on a security.

Different securities have different sensitivities to different types of market wide shocks: inflation, business cycles, interest rates, etc. Multi-factor models allow for different sensitivities to different factors and the identification of each factor's contribution to the security's return.



Example 3.4

A two-factor model

If we believe the only macro-economic sources of risk are business cycles (gross domestic product, GDP) and interest rates (IR), the rates of return should then respond to unanticipated changes in both factors. The formula would be:

$$E(R_i) = R_f + \beta_{GDP} (\text{risk premium GDP}) + \beta_{IR} (\text{risk premium IR})$$

= *minimum return* + *risk premium*

The expected return on a security should be:

risk-free return (R_f)

plus

a risk premium based on the security's sensitivity to unanticipated changes in GDP

plus

a risk premium based on the security's sensitivity to unanticipated changes in interest rates.

A multi-factor model attempts to describe security returns as a function of a limited number of factors. However, when constructing a multi-factor model it is difficult to decide how many and which factors to include.

The Fama and French model expanded the CAPM by adding factors for company size and value in addition to the market risk factor of CAPM. Fama and French identified two types of company securities that tended to do better than the market as a whole, they found that:

- small cap stocks tended to outperform large cap stocks; and
- value stocks (those with a high book value to price ratio) tended to outperform growth stocks.



Fama and French model

The securities favoured by the Fama and French model tend to be more volatile than the stock market as a whole, and the higher reward should be considered as the compensation for taking on higher risk.

One of the best known multi-factor asset pricing models, based on arbitrage pricing theory (APT), was developed by Stephen Ross. He suggested a more general multi-factor structure, which is based on the idea that there are a few major macro-economic factors or indices that influence security returns. Additional factors can be added that relate to the fundamentals of the company being analysed, such as earnings growth, return on equity, dividend yield etc.

Multi-factor models are able to make a more detailed prediction of risk and return, and improve our understanding of security returns.



Multi-factor models

Although there are differences between multi-factor models, they all share two basic ideas:

- investors require extra return for taking risk; and
- they appear to be predominantly concerned with the risk that cannot be eliminated by diversification.

C1 Arbitrage pricing theory (APT)

APT is a general theory of asset pricing that has become influential in the pricing of securities. It is based on the idea that a security's returns can be predicted using the relationship between the security and a number of common risk factors, where sensitivity to changes in each factor is represented by a factor-specific beta. The model-derived return can then be used to correctly price the security. If the price diverges, arbitrage activities should bring it back into line (arbitrage is the practice of taking advantage of security mispricing to make a risk-free profit), so that it is not possible for a security to yield better returns than indicated by its sensitivity to the various factors.

Like the CAPM, it argues that returns are based on the systematic risk to which a security is exposed, rather than total risk. Unlike the CAPM, however, the APT is based on the belief that asset prices are determined by more than just one type of market risk.



Consider this...

No matter how well a portfolio is diversified, these factors cannot be avoided, although different securities will have different sensitivities to each of those factors.

According to APT, the expected return on a security is determined by adding the risk-free rate to figures representing the risk premium for **each** of the risk factors. As in the CAPM, any diversifiable risk is unrewarded, because it can be avoided. However, the APT differs from CAPM in that it assumes that each investor holds a unique portfolio with its own particular degree of exposure to the fundamental economic risks that influence asset returns, as opposed to an identical market portfolio.

The APT therefore has more flexible assumption requirements than the CAPM.

C2

One difficulty with the APT is its generality, as the model does not tell us which factors are relevant. In addition, the number and nature of those factors is likely to change over time and between economies.



Influences on security returns

Research suggests that there are four important factors that influence security returns:

- unanticipated inflation;
- changes in the expected level of industrial production;
- changes in the default risk premium on bonds; and
- unanticipated changes in the return of long-term government bonds over Treasury bills (shifts in the yield curve).

The inclusion of multiple factors does, however, mean that more betas have to be calculated, and there is no guarantee that all of the relevant factors have been identified. Multi-factor models are widely used by quantitative model-driven investment managers and in risk management.

D Efficient market hypothesis (EMH)

The efficient market hypothesis (EMH) was developed by Eugene Fama in the 1960s. He put forward the idea that in an open and efficient market, security prices fully reflect all available information and prices

rapidly adjust to any new information. For this reason, market prices are always the correct price for any given security and reflect the best estimate of their true intrinsic value. It is therefore not possible to outperform the market by picking undervalued securities, since the EMH indicates that there are no undervalued or overvalued securities.



Origins of the EMH

The EMH was developed from the Random Walk Theory, which suggests that security price movements are random and are therefore unpredictable. Thus, new information is unpredictable and so are future security price movements.

The crux of the EMH is that it should be impossible to achieve returns in excess of average market returns consistently through stock selection. Only new information will move security prices significantly, and since new information is presently unknown and occurs at random, future movements in security prices are also unknown and so move randomly. The only way an investor can possibly obtain higher than average returns is by purchasing riskier investments. If markets are efficient and current prices fully reflect all information, then buying and selling securities in an attempt to outperform the market will effectively be a game of chance rather than skill.

D1 Three forms of the EMH

There are three forms, or levels, of the EMH, which differ in respect of the information that they consider:

- weak form efficiency;
- semi-strong form efficiency; and
- strong form efficiency.

Weak form efficiency

This states that current security prices fully reflect all past price and trading volume information, and future prices cannot be predicted by analysing this type of historical data. Therefore, technical analysis, which charts historical trading data and looks for trends, is of no use in determining future prices, and will not be able to consistently produce market-beating returns.

Semi-strong form efficiency

This states that security prices adjust to all publicly available information very rapidly and in an unbiased way, so that no excess returns can be earned by trading on that information. Public information includes not only past prices, but also information reported in a company's financial statements, company announcements and economic factors.

This indicates that a company's financial statements are of no help in forecasting future price movements and securing excess returns.

Semi-strong form efficiency implies that neither fundamental analysis, which looks at the historical financial performance of a company, nor technical analysis, which charts historical trading data, will reliably be able to help identify whether a security is over or undervalued.

Strong form efficiency

This states that security prices reflect all information that any investor can acquire. In this form, all

information includes not only public information, but also private information, typically held by corporate insiders such as officers or executives of a company, or their advisers.



Consider this...

Corporate insiders could make abnormal profits by trading on information before it is made publicly available. However, insider-trading laws make this activity illegal, which means that a company's management and their advisers (insiders) are not able to make gains from inside information they hold.

D2 Evidence to support the EMH

The debate about the efficiency of markets has resulted in hundreds of studies, attempting to determine the validity of the different forms of the hypothesis:

- Generally, strong and consistent evidence supports the weak form of the EMH. The vast majority of studies have found that technical analysis (buying and selling securities based on trends in historical market data) does not lead to out-performance after transaction costs are taken into account.
- The semi-strong form of the EMH has strong factual support, although it is not conclusive. Research shows that for most types of information the markets are semi-strong form efficient, although some anomalies indicate they are not completely semi-strong form efficient.
- Tests of the strong-form of the EMH have focused on looking at investors who have access to non-public information or an ability to react to new information before other investors. There is evidence that company directors and their advisers can outperform other investors, however, investment managers on average do not. It would therefore appear that the market is not strongly efficient in the strictest sense of the definition.

The bulk of the evidence supports the EMH; however, in reality markets have varying degrees of efficiency, with some markets being more efficient than others. In markets that are less efficient, more knowledgeable investors can outperform less knowledgeable ones:

- Government bond markets are considered extremely efficient.
- Most researchers consider large capitalised stocks to be very efficiently priced, while the prices of smaller capitalised stocks or ones which are not widely followed by analysts are considered to be less efficient.
- Venture capital, which does not have a liquid market, is considered less efficient because different participants may have varying amounts and quality of information.

The efficient market debate plays an important role in the decision between active and passive investment. If the EMH is correct, instead of picking stocks it makes sense to invest in tracker or index funds, which will mirror the overall performance of the market. On the other hand, where markets are less efficient there is the opportunity for outperformance by skilful, knowledgeable investors.



Reinforce

Which UK markets do you think would be most the most efficient, and which might be the least efficient?

The EMH was widely accepted until the 1990s, when behavioural economists began to question its validity. They argued that markets were far from perfect in terms of processing information and that other factors, such as investor confidence, must be taken into account.



Question 3.3

Does the EMH support active stock selection or passive investing (e.g. index funds)?

E Behavioural finance

Behavioural finance is an area of research that explores how emotional and psychological factors affect investment decisions. It attempts to explain market anomalies and other market activity that is not explained by the traditional finance models such as modern portfolio theory and the EMH, and offers alternative explanations of the key question of why security prices deviate from their fundamental values.

Much of the traditional financial theory is based on the assumption that individuals act rationally and consider all available information when making investment decisions. The key argument of behavioural finance is that psychological factors or behavioural biases affect investors. These limit and distort their information and may cause them to reach incorrect conclusions, even if the information is correct.



Behavioural finance

Behavioural finance also appears in [chapter 7](#) where we examine the investment advice process.

Behavioural finance highlights certain inefficiencies caused by the irrational way in which investors react to new information, as causes of market trends and in extreme cases of speculative market bubbles (the dotcom bubble in 1999) and stock market crashes, such as in 1987 and 2008. By looking at bubbles and crashes, it becomes clear that psychology can be as important as finance and economics for the explanation of such phenomena.

E1 Psychological factors or behavioural biases

Psychological factors and behavioural biases can be categorised in many ways, although these often overlap and can be indistinguishable from one another. The following section considers some of the principal theories within behavioural finance that often contradict the basic assumptions of traditional financial theory.

E1A Prospect theory/loss aversion

Prospect theory deals with the idea that people do not always behave rationally, in particular in respect to their risk tolerance when they are facing a loss or have made a profit. The theory suggests that there are persistent biases which influence people's choices under different conditions of uncertainty.

Research has shown that investors place different weights on gains and losses, and on different ranges of probability. Individuals are much more distressed by prospective losses than they are made happy by equivalent gains, and responded differently to equivalent situations depending on whether that situation is presented in the context of a loss or a gain.

Research has also found evidence that people play safe when protecting gains, but if faced with the possibility of losing money they often take riskier decisions aimed at loss aversion. This may include a reluctance to realise losses, so people hold on to losing investments longer than they should in the hope

that given time the loss will be recouped. If they were to sell they would realise the loss, otherwise it is just a paper loss.



Consider this...

Consider your own behaviour in this regard – and that of your clients and/or other investors you know.

E1B Regret

Investors may be less willing to sell a losing investment because it is showing a loss. People tend to feel sorrow and grief after having made an error of judgment. Investors deciding whether to sell a security are typically emotionally affected by whether the security was bought for more or less than the current price. Investors therefore avoid selling stocks that have gone down to avoid the pain and regret of having made a bad investment.

It is the fear of regret, which causes investors to hold losing positions too long in the hope that they will become profitable, or sell too soon to lock in profits in case they turn into losses.

E1C Overconfidence and over and under reaction

A key behavioural factor, and perhaps the most robust finding from research that explains market anomalies, is **overconfidence**. Extensive evidence shows that people have a tendency to overestimate their own skills and predictions for success, and underestimate the likelihood of bad outcomes over which they have no control.

Investors tend to be more optimistic when the market goes up and more pessimistic when the market goes down. They typically give too much weight to recent experience and extrapolate recent trends that often run contrary to long run averages and statistical odds.



Effect of overconfidence

Overconfidence has been found to cause investors to over-estimate the reliability of their knowledge, under estimate risks and exaggerate their ability to control events, which can lead to excessive trading volumes and speculative bubbles.

E1D Criticisms of behavioural finance

The theories of behavioural finance, incorporating behavioural and psychological factors, are now beginning to challenge existing efficient market models in terms of explaining market anomalies. However, they do not appear to be able to predict the effect on the market of human behaviour.

There is little doubt that various psychological and behavioural factors impact on investment decisions and can affect the market significantly. However, some believe they have little use in forecasting the markets, since the many factors of human behaviour cannot be quantified and so will not enable an individual investor to earn abnormal returns.

Critics of behavioural finance, who typically support the existing efficient market models, contend that behavioural finance is more a collection of explanations of anomalies than a true branch of finance and that these anomalies will eventually be priced out of the market.

On the other hand, an understanding of behavioural finance can help investors avoid common mistakes, such as holding on to loss-making positions for too long, and help advisers, who understand their clients' behavioural biases, to communicate with these clients more effectively.



Key points

The main ideas covered by this chapter can be summarised as follows:

Modern portfolio theory (MPT)

- MPT suggests that portfolios can be constructed that maximise returns and minimise risk by carefully choosing different investments.
- The most commonly used measure of risk is volatility measured by standard deviation. The greater the standard deviation, the greater the volatility and therefore the associated risk.
- The overall volatility and risk of a portfolio can be reduced by diversification. This can be achieved by:
 - combining different types of assets within a portfolio, and
 - holding a variety of investments of each asset type.
- The effectiveness of diversification in reducing a portfolio's risk depends on the degree of correlation between assets.
- The risk for individual security returns has two components:
 - systematic or market risk, which cannot be diversified away.
 - non-systematic or investment-specific risk, which can be eliminated by diversification.
- The sensitivity of a security in relation to the market as a whole is expressed in terms of its beta (β).
- The efficient frontier represents the set of portfolios that have the maximum rate of returns for every given level of risk. Each portfolio lying on the efficient frontier offers the highest expected return relative to all other portfolios of comparable risk.

Capital asset pricing model (CAPM)

- The CAPM is a model that derives the theoretical expected return for a security as a combination of the return on a risk-free asset and compensation for holding a risky asset.
- The CAPM is based on a number of assumptions, some of which are more valid than others.

Multi-factor models

- Multi-factor models allow for different sensitivities to different macro-economic and fundamental factors and the identification of each factor's contribution to the security's return.
- Arbitrage pricing theory (APT) is based on the idea that there are a number of major macro-economic factors that influence security prices.

Efficient market hypothesis (EMH)

- According to the EMH, in an open and efficient market, security prices fully reflect all available information and prices rapidly adjust to any new information.
- Buying and selling securities in an attempt to outperform the market will effectively be a game of chance rather than skill.
- There are three forms or levels of the EMH, which differ in respect of the information that they consider: weak form efficiency, semi-strong efficiency and strong form efficiency.
- If the EMH is correct, instead of picking stocks it makes sense to invest in tracker or index funds, which will mirror the overall performance of the market.

Behavioural finance

- Behavioural finance is an area of research that explores how emotional and psychological factors affect investment decisions.
- It attempts to explain market anomalies and other market activity that is not explained by the traditional finance models.
- It highlights certain inefficiencies caused by the irrational way in which investors react to new information, as causes of market trends and in extreme cases of speculative market bubbles and crashes.
- Although the theories are able to explain market anomalies, they appear less able to predict the effect of human behaviour on the markets.



Question answers

- 3.1 Approximately 68% of returns will fall between 0% and 20% (i.e. $10\% \pm 10\%$). Therefore, since a normal distribution is symmetric, 16% will be above 20% and 16% below 0%, i.e. negative returns.
- 3.2 $E(R_i) = 3.5 + 1.4(8 - 3.5) = 9.8\%$
- 3.3 The EMH indicates that all information is reflected in market prices. Therefore, if the hypothesis holds, stock picking will not lead to persistently outperforming the market, so it supports passive index investing.



Self-test questions

1.	What does standard deviation measure?
2.	What does beta measure?
3.	What type of risk can be eliminated by holding a diversified portfolio?

4.	Why, in theory, should investment managers construct portfolios that lie on the efficient frontier?
5.	What is usually used as representing a risk-free asset in the CAPM equation?
6.	How does APT differ from CAPM?
7.	What are the three forms of the EMH, and what information do they consider?
8.	How does behavioural finance explain market anomalies?

You will find the answers at the back of the book

4 The principles of the time value of money

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B Real returns and nominal returns	4.2
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Learning objectives

After studying this chapter, you should be able to:

- apply the principles of the time value of money;
- calculate compound interest and discount factors;
- calculate annual interest rates when interest is compounded more than once per year;
- calculate discounted cash flows; and
- differentiate between real returns and nominal returns.

Introduction

Which would an investor rather have: £10,000 now or £10,000 in a year's time? The answer must surely be £10,000 now. A sum of money now is more valuable than the same sum later, because it can be invested and earn interest over that period. This is the basic meaning of 'the time value of money'.

In this chapter we look at the formulas linking present and future value, and how the calculations are

adjusted when sums of money are invested over multiple periods, or interest is paid at different intervals. Please note that some of the example calculations require the use of a scientific calculator (although some manual calculators may be able to perform the functions).



Key terms

This chapter features explanations of the following:

Accumulation and discounting	Annual equivalent rate (AER)	Annual percentage rate (APR)	Compound interest
Discounted cash flows	Effective annual rate (EAR)	Future value	Interest rate
Nominal returns	Present value	Real returns	Time period

A Time value of money

A1 Definitions

It is important to be very clear about the basic definitions used in time value of money calculations:

Term	Definition
Present value (<i>PV</i>)	The amount of capital invested today is called the present value, denoted by <i>PV</i> . This is sometimes referred to as the principal.
Time period (<i>n</i>)	The time for which the capital is invested is split into time periods and the number of time periods is denoted by <i>n</i> . Time periods are usually yearly, but can be half-yearly, quarterly, monthly or daily.
Interest rate (<i>r</i>)	The amount paid on the investment for each time period is usually quoted as a percentage and called the interest rate. It is usual to express this as a decimal fraction and call it <i>r</i> . For instance, an interest rate of 7% is written $r = 7/100 = 0.07$ and an interest rate of 10% is written $r = 10/100 = 0.1$.
Future value (<i>FV</i>)	The accumulated value of an amount of money invested for <i>n</i> time periods, at a rate of interest <i>r</i> , is denoted by <i>FV</i> .

A2 Linking present value and future value

In practice, money paid as interest is usually reinvested, and earns interest in the next period. Interest calculated in this way is called compound interest.



Example 4.1

£1,000 invested at 5% would give rise to £50 interest at the end of the first year. This would give an accumulated total of £1,050 that at a continuing rate of 5% would give rise to a further amount of interest of £52.50 at the end of the second year. Interest that itself earns interest is another way of expressing or defining compound interest.

The basic formula for calculating compound interest is:

$$FV = PV(1 + r)^n$$

where FV is the future value or accumulated sum, and PV is the present value or principal invested.



Future value formula

Formula for accumulation of capital sum

The basic compound interest formula is built up as follows:

- It assumes that one unit of capital or money is 1.
- Interest is payable at the rate of r per year, as a percentage figure, which is converted to a decimal:

$$\frac{\text{rate of interest}}{100}$$

so that 5% = 0.05 and 12% = 0.12.

- The unit of capital increases to $1 + r$ at the end of year one; so that the value at that time is $FV = 1 + r$
- This is then reinvested at the rate of r for a further year, and becomes $(1 + r) \times (1 + r)$ or $(1 + r)^2$
- Similarly, for three years, $(1 + r)^3$.



Example 4.2

A sum of £2,000 invested at an interest rate of 5% for five years would increase to:

$$FV = PV(1 + r)^n$$

$$= £2,000 \times (1 + 0.05)^5$$

$$= £2,000 \times (1.05)^5$$

To raise a number to a power, most calculators have the symbol x^y , y^x or $^{\wedge}$. It might require the use of a shift key to make the function work on some calculators. So $1.05 x^y 5$ should give 1.28 (please note, the final answer below is arrived at by using the exact, unrounded value of the sum multiplied by the full value of £2,000, although the rounded value to two decimal places (1.28) has been shown in the calculation for presentation purposes). Make sure you always calculate the value of the bracketed numbers first and that you are clear on how your calculator handles this calculation.

$$= £2,000 \times (1.28)$$

$$= £2,552.56$$



Example 4.3

A sum of £1,000 is invested for four years at an annual rate of 3%. How much will be accumulated at the end of four years?

$$FV = PV(1 + r)^n$$

$$FV = £1,000 \times (1 + r)^n$$

$$= £1,000 \times (1.03)^4$$

$$= £1,000 \times 1.13$$

$$= £1,125.51.$$

Please note that the figures in this example have been rounded to two decimal places for presentation purposes only. Make sure that you follow the calculation as shown on your calculator to arrive at the result.



Question 4.1

A sum of £5,000 is invested for five years at an annual rate of 4%. How much will be accumulated at the end of the five years?



Example 4.4

A client invests £10,000 into a unit trust and after five years it is worth £15,785. What compound rate of return have they achieved in a year?

In this example we need to calculate what r is.

$$FV = PV(1 + r)^n$$

$$£15,785 = £10,000(1 + r)^5$$

$$£15,785/£10,000 = (1 + r)^5$$

$$1.5785 = (1 + r)^5$$

To proceed further we need to isolate $1 + r$. We do this by taking the 5th root of each side of the equation:

$$5\sqrt{1.5785} = 1 + r$$

$5\sqrt{1.5785}$ is calculated using the $x\sqrt{y}$ key. If your calculator doesn't handle this function, it could also be written as $(1.5785)^{1/5}$ which is the same as $(1.5785)^{0.2}$. Using the x^y function on the calculator:

$$1.0956 = 1 + r$$

$$r = 1.0956 - 1$$

$$r = 0.0956$$

Always remember to express any interest rate answer as a percentage to two decimal places:

$$r = 9.56\%.$$

Please note that you should use the full value as shown on your calculator when doing the calculation. The figures here have been rounded to four decimal places, where appropriate, for presentation purposes only.



Example 4.5

It is also possible to change the compounding rate during the accumulation period. For example, the sum of £5,000 is invested at 5% a year for two years; then the accumulated capital and interest is reinvested for a further three years at 7% a year. What will the total sum be at the end of five years? This question calculates the future value using compounding:

$$FV = £5,000 \times (1 + r_1)^{n_1} \times (1 + r_2)^{n_2}$$

$$= £5,000 \times (1.05)^2 \times (1.07)^3$$

Always calculate the bracketed parts of the equation first:

$$= £5,000 \times 1.10 \times 1.23$$

$$= £6,753.05.$$

Please note that you should use the full value as shown on your calculator when doing the calculation and that the figures here

A3 Interest payable at more frequent intervals

Interest rates are usually quoted as an annual rate, referred to as the nominal rate, but interest could be paid over any period, e.g. daily, monthly, quarterly or half yearly rather than at the end of the year.

- For example, interest could be expressed as a nominal rate of 10%, paid quarterly. This means that some of the interest is paid sooner and can be reinvested earlier, which makes the effective rate of interest greater than the equivalent nominal rate of interest.
- The total return depends on the frequency of compounding (known as conversion periods); e.g. £1,000 invested for twelve months at 10% a year generates £100 interest if the interest is paid only once at the end of the year.
 - When interest is paid half yearly (i.e. two conversion periods) the total interest after one year is higher and is £102.50. For each half-year, the interest accumulation factor is half the annual rate of 10%, i.e. 5%.
 - After six months, the interest plus capital is £1,050, and this earns interest for another six months, to give an accumulated total of £1,102.50. If interest were payable quarterly, or with four conversion periods, the interest accumulation factor would be 10%/4 or 2.5% compounded quarterly to give an accumulated total of £1,103.81.
- If we express all the above arithmetically, we have the following:

For annual interest $£1,000 \times 1.10$

For half-year interest $£1,000 \times (1.05) \times (1.05)$

or $£1,000 \times (1.05)^2$

For quarterly interest $£1,000 \times (1.025) \times (1.025) \times (1.025) \times (1.025)$

or $£1,000 \times (1.025)^4$

We can see from Table 4.1 the effect of interest being paid at different intervals:

Table 4.1: Effect of 10% nominal annual interest compounded at different periods


Interest compounded	No. of periods in one year	Value of £1 after one year	Effective annual rate %
Annually	1	1.1000	10.00
Half-yearly	2	1.1025	10.25
Quarterly	4	1.1038	10.38
Monthly	12	1.1047	10.47

Daily	365	1.1052	10.52
-------	-----	--------	-------

The formula to find the effective annual rate (EAR) of interest is:

$$EAR = (1 + r/n)^n - 1.$$

The EAR is used for both loans and deposits.



Example 4.6
 What is the effective rate if the nominal rate is 8% per year, compounded on a quarterly basis?

It is a good idea to get in the habit of writing down the formula when doing calculations as it will help you to learn them.

Effective rate = $(1 + r/n)^n - 1$

= $(1 + 0.08 / 4)^4 - 1$

= $(1.02)^4 - 1$


= $(1.0824) - 1 = 0.0824 \times 100$ to get a percentage

Effective rate is $0.0824 \times 100 = 8.24\%$.

Please note that you should always use the full value as shown on your calculator. The figures shown here are rounded to four decimal places, where appropriate, for presentation purposes only.

A3A Annual percentage rate and annual equivalent rate

The EAR of interest is also referred to as the annual percentage rate (APR) or annual equivalent rate (AER).




APR or AER?
 APR is generally used for loans, whereas AER applies to deposits.

The APR/AER can be found using the same formula as above:

$$APR/AER/EAR = (1 + r/n)^n - 1.$$

The answer must be multiplied by 100 so that we can express the answer as a percentage to two decimal places.



Example 4.7
 What is the APR on a loan where interest is charged at the rate of 24% a year on a monthly basis?

This can also be expressed as a rate of 2% a month.

$$\text{APR} = (1 + 0.24 / 12)^{12} - 1 = (1.02)^{12} - 1$$

Always calculate the bracketed part of the equation first.

$$= 1.2682 - 1$$

$$= 0.2682$$

Multiply by 100 to express as a percentage to two decimal places

$$= 26.82\%$$

Please note that you should always use the full value as shown on your calculator. The figures shown here are rounded to four decimal places, where appropriate, for presentation purposes only.

A4 Present value

We have looked at the calculations for the accumulation of capital sums. We also need to be able to calculate the present value (*PV*) or amount that has to be invested now to reach a required sum at a future date. The formula is:

$$PV = FV / (1 + r)^n.$$



Example 4.8

What amount has to be invested to accumulate to £1,000 at the end of five years at an annual interest rate of 5%?

$$PV = FV / (1 + r)^n$$

$$= £1,000 / (1.05)^5$$

$$= £1,000 / (1.28)$$

$$PV = £783.53$$

Please note that you should always use the full value as shown on your calculator. The figures shown here are rounded to two decimal places, where appropriate, for presentation purposes only.



Question 4.2

If the nominal rate of interest is quoted as 6% per annum and interest is paid weekly, what is the EAR of interest?

A4A Accumulation and discounting of regular savings

In this section, we will consider how to calculate:

- the sum of money accrued from a series of payments; and
- the present value of a series of payments.

If you set aside £100 a year at an interest rate of 8% (payable annually), we can calculate the value of the accrued investment at the end of ten years. In this case, we assume that the first payment is made at the end of year one; so at the end of ten years, the first payment will have been invested for nine years and will have a value of $100 \times (1.08)^9$.

The next payment is made at the end of year two; by year ten it will have been invested for eight years and will have a value of $100 \times (1.08)^8$.

In tabular form, this is as shown below:

End of year	Amount £	Value at end of year 10 £
1	$100 (1.08)^9$	199.90
2	$100 (1.08)^8$	185.09
3	$100 (1.08)^7$	171.38
4	$100 (1.08)^6$	158.69
5	$100 (1.08)^5$	146.93
6	$100 (1.08)^4$	136.05
7	$100 (1.08)^3$	125.97
8	$100 (1.08)^2$	116.64
9	$100 (1.08)$	108.00
10	100	100.00

At the end of year ten, the total value is the total of the final column. However, rather than calculate the total value in the lengthy fashion shown above, we can use the following formula:

$$FV = P \left\{ \frac{(1+r)^n - 1}{r} \right\}$$

P = the regular payment.

This formula allows us to calculate an accumulated amount from a regular payment paid in arrears over a given period. It might look a bit intimidating, but there is no new maths beyond what we have already done. Example 4.9 below shows you how to use this formula to work out the value of the accrued investment as shown in tabular form in Table 4.2.



Example 4.9

If £100 is invested at the end of each year at an interest rate of 8% a year for ten years, what will the accumulated or future value at the end of ten years be?

Using the above formula, the calculation is:

$$FV = £100 \times \left(\frac{(1 + 0.08)^{10} - 1}{0.08} \right)$$

$$FV = £100 \times (2.16 - 1)/0.08$$

$$FV = £100 \times 14.49$$

$$FV = £1,448.66$$

So, the value at the end of ten years will be £1,448.66.

Please note that you should use the full values as shown on your calculator when doing this calculation. The figures shown here have been rounded to two decimal places for presentation purposes.

We have now seen how to calculate the future value of an investment if we know certain information, including the present value. We refer to the process of calculating the future value as compounding. We can also reverse this procedure and calculate the present value of an investment if we know certain information, including the future value. We refer to the process of calculating the present value of cash flows as discounting. Discounting is therefore the opposite of compounding.

We use discounted cash flow analysis to calculate the present value of an investment's future cash flows to arrive at a fair value of the current investment price. We can then compare the theoretical present value of the investment against the actual current traded price of the investment in the financial markets. This will give the investor an indication of whether the investment is currently under or overvalued in the market and if it is then either worth buying or selling.

Companies may pay dividends from profits to their shareholders (see [chapter 1](#)). The monetary value of dividends will be variable and so the present values, after discounting, will be uncertain.

Fixed-income securities, such as bonds, will pay a constant fixed amount of interest (known as the

coupon) to the bondholders on a regular basis. We can use discounting to calculate the present values of these fixed cash flows. Example 4.10 shows the discounting formula for the predicted price of a bond. Fixed-income securities were covered in chapter 1 of this study text.

The basic formula for calculating discounted cash flows is:

$$PV = \frac{FV}{(1+r)^n}$$

Where PV is the present value of the cash flow, FV is the future value or accumulated sum, r is the interest rate and n is the number of time periods.



Example 4.10

A bond pays a 6.5% annual coupon and is redeemable at its par or nominal value of £100 in two years' time. The interest rate is currently 5% per annum. What is the theoretical price of the bond?

Remember the formula:

$$PV = \frac{FV}{(1+r)^n}$$

A 6.5% coupon bond paying annual interest will pay a fixed amount of £6.50 at the end of each year (i.e. 6.5% of the £100 par or nominal value). This bond will therefore pay £6.50 to the bondholder at the end of year 1 (therefore $n = 1$, for the end of year 1 payment, plus it will pay another £6.50 at the end of year 2 (therefore $n = 2$ for the end of year 2 payment). Also at the end of year 2, the bond will be redeemed at its par or nominal value of £100.

The present value of the bond is calculated as follows:

$$PV = \frac{£6.50}{(1+0.05)^1} + \frac{£106.50}{(1+0.05)^2}$$

$$PV = £6.19 + £96.60$$

Therefore, the theoretical present value of the bond = £102.79

We can then compare the theoretical present value of the bond against the actual current traded price in the financial markets. For example, if the actual trading price of the bond in the markets is £104.00, then the theoretical price of the bond calculated at £102.79 would appear to show that this bond is presently trading above its theoretical price and may not therefore represent a good investment at this time.

Please note that you should use the full values as shown on your calculator when doing this calculation. The figures shown here have been rounded to two decimal places for presentation purposes.

If we can calculate the future value of a series of payments plus interest, we can also use the formula to calculate the sum of money needed now to make regular payments plus interest over a fixed term at a fixed rate of interest. This is the present value and it is called an annuity (A) and the general formula is:

$$A = P \left(\frac{1 - (1+r)^{-n}}{r} \right)$$

This again may look complicated, but really the only difference here is the order of the symbols and the

fact that we are now raising the $1 + r$ to the power of $-n$ (minus n). Let's look at an example.



Example 4.11

How much needs to be invested as a lump sum to provide an annual payment of interest and capital of £100 at the end of each year for ten years, if the interest earned is 8% a year? This is known as an annuity and using the formula above we can insert the figures from this example. Note that 1.08 is now raised to the power of -10 this time.

$$A = P \left\{ \frac{1 - (1+r)^{-n}}{r} \right\}$$

Remember to calculate the smaller bracket within the bigger bracket first.

$$A = 100 \left\{ \frac{1 - (1.08)^{-10}}{0.08} \right\}$$

1.08 to the power of $-10 = 0.46$

$$A = 100 \left\{ \frac{1 - 0.46}{0.08} \right\}$$

Deduct 0.46 from 1 to get 0.54

$$0.54 \text{ divided by } 0.08 = 6.71$$
$$\text{So } £100 \times (6.71) = £671$$

We now know that the present value of £100 a year earning 8% interest is £671.

Please note that you should use the full values as shown on your calculator when doing this calculation. The figures shown here in this example have been rounded to two decimal places, where appropriate, for presentation purposes.

We also need to be able to calculate the payments that make up an annuity when the capital and interest are paid monthly. The formula is exactly the same as we have already used but this time we express everything as months, not years.



Example 4.12

An individual has £30,000 invested in a building society paying a nominal 4.5% a year. Interest is credited monthly and he intends to draw out capital and interest monthly, so that at the end of six years the account will have a nil balance. How much can be withdrawn at the end of each month? Six years is 72 months. The monthly rate of interest is found by dividing the annual rate by 12; $4.5\% / 12 = 0.375\%$, rounded to 0.38%.

Therefore, using the same annuity formula as above, we can insert the figures from this example:

$$30,000 = P \left\{ \frac{1 - (1.0038)^{-72}}{0.0038} \right\}$$

$$30,000 = P \left\{ \frac{1 - 0.7638}{0.0038} \right\}$$

$$£30,000 = P (0.24 / 0.0038)$$

$$£30,000 = P (62.10)$$

$$£30,000 / 62.10 = £476.23$$

$$P = £476.22$$

£476.22 can be withdrawn each month.

Please note that you should use the full values as shown on your calculator when doing this calculation. The figures shown here in this example have been rounded to four decimal places, where appropriate, for presentation purposes.

B Real returns and nominal returns

As we have seen in previous chapters, inflation can significantly erode the value of assets and most investors will be concerned about the increase (or decrease) in the purchasing power of their investments.

Real returns are calculated by adjusting nominal returns to take account of inflation (nominal returns ignore inflation).

The real return is approximately the nominal return from an investment minus the inflation rate and the formula is:

$$R_{\text{REAL}} = R_{\text{NOM}} - R_{\text{INF}}$$

where

R_{REAL} is the real return

R_{NOM} is the nominal return

R_{INF} is the inflation rate



Example 4.13

An investment generated a return of 11% over the past year and the inflation rate was 3% over the same period. The approximate real return is:

$$R_{\text{REAL}} = R_{\text{NOM}} - R_{\text{INF}} = 11\% - 3\% = 8\%$$

The investment generated an approximate real return of 8%.

Example 4.14 considers expected returns as opposed to historic returns.



Example 4.14

An adviser forecasts that inflation over the next year will be 2.5%. His client has a long-term target of achieving real returns of 4%. Based on his inflation forecast the adviser realises he will need to generate an approximate nominal return of 6.5% to achieve the target return over the next year. The approximate nominal return can be found by rearranging the equation as follows:

$$R_{\text{NOM}} = R_{\text{REAL}} + R_{\text{INF}}$$

$$R_{\text{NOM}} = 4\% + 2.50\% = 6.50\%$$



Key points

The main ideas covered by this chapter can be summarised as follows:

Time value of money

The relationship between present and future values.

- The formula linking present and future value is $FV = PV(1 + r)^n$ where FV is the future value, PV is the present value or principal invested, and the principal is invested for n periods at an interest rate r .
- To calculate the PV of a future sum of money we need to discount, and the FV formula is rearranged to give $PV = FV/(1 + r)^n$.

$$FV = P \left\{ \frac{(1+r)^n - 1}{r} \right\} \quad \text{where } P \text{ is the regular payment.}$$

- To calculate the future value of series of regular payments we use the formula
- Calculating effective annual returns when interest is paid at more frequent intervals.
- The general formula to find the effective annual rate (EAR) of interest is:
 $EAR = (1 + r/n)^n - 1$ where r is the nominal rate of interest and n is the number of conversion periods or frequency of interest payments each year.
- The EAR is also referred to as the annual percentage rate (APR) or annual equivalent rate (AER).

Real returns versus nominal returns

- The real return from an investment is the return after adjusting for inflation.
- Real returns are important for an investor since they represent the increase (or decrease) in the purchasing power of their investment or portfolio.
- The formula linking real and nominal returns is: $R_{\text{REAL}} = R_{\text{NOM}} - R_{\text{INF}}$
where R_{REAL} is the real return, R_{NOM} is the nominal return and R_{INF} is the inflation rate.



Question answers

$$\begin{aligned} 4.1 \quad FV &= £5,000 \times (1 + r)^n \\ &= £5,000 \times (1.04)^5 \\ &= £5,000 \times 1.22 \\ &= £6,083.26 \end{aligned}$$

Please note that you should use the full values on your calculator when doing this calculation. The figures shown here have been rounded to two decimal places for presentation purposes.

4.2 Effective rate = $(1 + r/n)^n - 1$

= $(1 + 0.06/52)^{52} - 1$

= $(1.0012)^{52} - 1$

= $(1.0618) - 1 = 0.0618$

Effective rate is 6.18%

Please note that you should use the full values on your calculator when doing this calculation. The figures shown here have been rounded to four decimal places for presentation purposes.



Self-test questions

1.	A lump sum of £20,000 is invested at 3% per annum for five years. How much will be accumulated at the end of five years?
2.	Interest is payable monthly at a (nominal) rate of 6% a year. What is the annual effective rate (AER)?
3.	Which of the following building societies offers the more favourable rate? Building Society A pays 5.70% annual interest, compounded half-yearly. Building Society B pays 5.65% annual interest, compounded monthly.
4.	What amount has to be invested to accumulate £10,000 at the end of three years at an annual interest rate of 2%?
5.	If the nominal rate of return on an investment is 6% and inflation is 3%, what is the approximate real rate of return?

You will find the answers at the back of the book

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5 The nature and impact of the main types of risk on investment performance

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Learning objectives

After studying this chapter, you should be able to:

- discuss inflation and its potential impact on investment values;
- describe other types of risk – including interest rate risk, credit risk and currency risk;
- differentiate between market risks and operational risks; and
- describe gearing and its effect on increasing investment returns and risk.

Introduction

In [chapter 7](#) we will discuss the investment advice process and the importance of establishing the risk

tolerance of a client as part of this process. However, in this chapter we consider the impact of risk on investment performance.



Key terms

This chapter features explanations of the following ideas:

Credit risk	Currency risk	Diversification	Event risk
Gearing	Inflation risk	Interest rate risk	Liquidity risk
Operational risk	Political risk	Relative risk	Systematic and non-systematic risk

A Main types of risk

Risk is an unavoidable part of the investment process and is implicit in all investments; even ‘risk free’ investments are exposed to some risk. In this section we consider the main types of risk that can affect investments.

A1 Systematic versus non-systematic risk

systematic and non-systematic risk are also covered in [chapter 3, section A4](#)

Risk can be categorised in different ways. The main types of risk are:

- **Systematic or market risk** – the risk that there might be a reduction in expected returns as a result of a fall in the stock market generally. For example, virtually all shares in the London Stock Exchange fell during the global financial crisis.



Market risk

Market risk is also called systematic risk and is measured by beta.



Activity

Look up the performance of the FTSE 100 and the FTSE All-Share over the last few years to identify the scale of the fall that took place during the financial crisis and its subsequent recovery; consider what risk this presents and where it might be acceptable to some investors and not to others.

- **Non-systematic or investment-specific risk** – the risk that there might be a reduction in expected returns as a result of some event or circumstance specific to a particular company. The problems faced by BP in the Gulf of Mexico oil spill in 2010 is a good example of investment-specific risk.

A2 Inflation risk

Inflation is a major consideration in the design of any investment plan.

Two of the main measures of inflation which are widely quoted are the retail prices index (RPI) and the consumer prices index (CPI).

RPI	<ul style="list-style-type: none">• RPI is a long-standing measure of UK inflation that historically has been used for a wide range of purposes such as the indexation of pensions and index-linked gilts.• RPIX is RPI excluding mortgage interest payments and is used to calculate income related benefits.• You should note that while the Office of National Statistics (ONS) publishes the RPI each month, its designation as a National Statistic has been cancelled (see chapter 2, section E1).
CPI	<ul style="list-style-type: none">• The CPI is the inflation measure used in the Government's target for inflation of 2%.• The CPI is used for increasing benefits and the State pension.

Another measure of Consumer Price Inflation is **CPIH**. This is a measure of UK consumer price inflation that includes owner occupiers' housing (OOH) costs. These are the costs of owning, maintaining and living in your own home. CPIH uses something called 'rental equivalence' to measure OOH.

CPIH is currently being reassessed as a National Statistic. You should keep up to date with latest developments.

A2A Cost of goods and services

The inflation rate is calculated each month by analysing changes in prices of over 700 separate goods and services in the UK. This basket of goods is reviewed annually to reflect changes in the things we buy.

The CPI 12-month rate was 2.3% in February 2017, compared with 1.8% in January.

A2B Deposit-based investments

Those hardest hit by inflation have usually been investors in deposits and fixed-interest securities where inflation erodes the value of the capital and interest payments, in many cases leading to negative real returns in an inflationary environment.

The best long-term protection against inflation is thought to be provided by investment in real assets, such as shares, property, infrastructure and commodities, but only over the long term. In the shorter term inflation creates uncertainty and the potential for governments to introduce restrictive economic policies, particularly if it is a result of overheating of the domestic economy. Index-linked government securities can also give protection against inflation in the long term, although in the short term their value is driven by market sentiment and their inflation-proofing is only guaranteed if the stock is bought at issue and held to redemption. Heavy demand for index-linked bonds can lead to negative real yields, so investors buying

in the secondary market will earn a return less than inflation if they hold to redemption.

A2C Real asset protection

In theory, the protection offered by real asset investments exists because their values generally move in line with inflation. In practice, however, the value of such assets can fall, regardless of inflation. This is because it is usually necessary for someone to buy the asset from the owner for the profit to be realised. Thus, liquidity and other factors can drive values.



Reinforce

The most obvious example of recent years has been UK house prices.

After surging in the mid-1980s, residential property prices fell sharply from 1989 onwards in many parts of the country, even though general inflation was rising.

It was not until the mid-1990s that prices began to rise again, helped by lower interest rates. From then to the financial crisis, property prices seemed to be on an ever-upward rising trend. Price rises were in excess of inflation and the long period of growth led to an asset price bubble that eventually burst.

A2D Causes of inflation

General inflation can be caused by many factors. In the past, it has been blamed on rising demand fuelled by expanding money supply. This then leads to the following:

- bottlenecks in production cause prices to rise and imports to flood into the economy;
- government and the financial markets respond with rising interest rates;
- cuts in public expenditure, as well as tax increases to dampen down demand; and
- economy enters recession and prices steady or perhaps fall as the supply of goods and services exceeds economic demand.

Some cycles are further exacerbated by external events such as:

- war or shortages, as occurred in the 1970s;
- prices of imported goods rising as overseas countries experience inflation and commodity prices also increase;
- currency devaluation; and
- high wage demands, which can be affected by trade union policies.

Investor sentiment can also be an important contributor especially as particular markets reach their peaks. There have been times when investors believed that houses, technology shares, commodities, gold, antiques and even tulip bulbs could never drop in value.



Results over time

Over time, the net result of real asset investment has always been positive after peaks and troughs have stabilised.

A2E Deflation

The reverse of inflation is deflation: a sustained fall in prices. The prospect of falling prices gives an incentive to consumers to delay spending, because goods will be cheaper tomorrow than they are today.

This leads to lower sales and lower economic output as the manufacturers lose the incentive and the profitability in producing goods. This explains why governments are very keen to avoid deflation and target steadily rising prices.



Reinforce

Deflation had a serious effect on the Japanese economy, which struggled with falling prices for almost 20 years. More recent figures including the latest for 2017 show that the economy has picked up, however, the Japanese experience of deflation has proved a salutary lesson for the world's central bankers.

A2F Stagflation

Stagflation is a combination of 'stagnant growth' and 'inflation'. Periods of stagflation have tended to be short-lived, but they are a painful reminder that inflation is not easily managed.

Stagnant growth, or recession, is a sign of weak business performance and usually rising unemployment. The problem of stagflation cannot be resolved by simply raising interest rates (the usual route to controlling inflation) as the economy is weak and businesses would suffer further leading to more job losses. In addition, if house prices are falling, rising interest rates would put further pressure on those already struggling.



Question 5.1

What investments might an investor consider including in their portfolio to give some protection against inflation?

A3 Interest rate risk

This is a particularly important consideration for fixed income or floating/variable rate securities.

When interest rates rise, the capital value of fixed-interest bonds will fall. This is because investors can get greater yields by switching to other investments that can reflect the increase in interest rate.

Conversely, when interest rates fall, as they did during the financial crisis, investors in fixed-interest bonds see the capital value of their securities rise. This is because the bondholder still receives a fixed return relative to the market which is offering a lower rate of return because of the fall in interest rate.

Interest rate risk is measured by duration. Modified duration is the measure of a sensitivity of a bond or bond portfolio to a move in interest rates; a bond with a duration of 5 will move by approximately 5% when interest rates move by 1% in the opposite direction. To reduce the interest-rate risk of a portfolio a manager would reduce or shorten the duration of the portfolio, typically by holding shorter-dated bonds or cash.

A3A Causes of interest rate moves

Interest rates can move due to a number of factors; some of these will affect short-term rates while others will affect rates across the yield curve and the shape of the yield curve.

The key factors are:

The economic cycle	Strong demand reflecting strong economic activity will push up rates whereas in a recession rates will be lower.
Government fiscal policy	When the government plans to issue gilts to fund a deficit this will tend to push up medium and long-term gilt yields.
Government monetary policy	Quantitative easing will tend to reduce short-term rates and when the government is also purchasing long-dated bonds, will also impact on long-term rates.
Inflation expectations	If inflation is expected to increase this will push up longer term interest rates, typically leading to a steeper yield curve.
Preference for liquid securities	In times of uncertainty investors prefer to hold their money in short-term securities pushing down short-term rates.

A4 Credit risk

Credit risk is particularly important for investors in bonds or those placing deposits with financial institutions.

There are a number of these types of risk:

Default risk	<ul style="list-style-type: none"> The risk that the value of a fixed-interest investment will fall when other investors decide that the probability of default has increased. The credit rating agencies issue ratings to assist investors assess the risk of a default.
Downgrade risk	<ul style="list-style-type: none"> The risk that the market anticipates that a credit rating agency is going to downgrade a bond. When a bond is downgraded the required return or yield rises to compensate the investor for the greater risk; this means the price of the bond will fall.
Credit spread risk	<ul style="list-style-type: none"> If investors become nervous (as they did in 2008) there is a flight to quality. This means that bonds issued by corporates will tend to underperform bonds issued by governments. This is a result of a widening of credit spreads, the difference between the yield of different grades of corporate bonds and government bonds.
Counterparty risk	<ul style="list-style-type: none"> This is the risk that a counterparty will not pay what it is obliged to on a bond, derivative, trade or other transaction. Any product or investment that has a derivative counterparty (structured products, for example, where a third party provides the guarantees) is exposed to counterparty risk.

A newer type of risk that is becoming increasingly important is **bail-in risk**.



Bail-in risk

Compared to a bail-out, where a government or central bank bails out a financial institution that is in financial difficulty – as we saw with the UK and US banks in the run-up to, during and after the financial crisis – a bail-in is where the financial assistance comes from the existing capital base, i.e. the institution's shareholders, bondholders and depositors.

This was seen in early 2013 when bondholders in Cyprus banks and depositors with more than 100,000 euros in their accounts were forced to write-off a portion of their holdings. Since then it was seen again with the restructuring of the Cooperative Bank also in 2013 with another proposed restructure in 2017.

With a bail-in, those with money in the bank may see their balance reduced which is at odds with the basis of a bank account being 100% secure. It also has a potential impact on the compensation provided by the Financial Services Compensation Scheme.

The concept of bail-in has been discussed by the Financial Stability Board and it may be used in the event of a future financial crisis, because the cost of financial assistance may need to be met by the institution, not the government.

A5 Currency risk

Where an investment is made overseas by a sterling-based investor there is the risk that sterling may appreciate against the overseas currency.



Example 5.1

If sterling is strong against the US dollar, any capital growth can be eliminated from investment in US markets and the value of dollar dividends in sterling terms is eroded.

Currency risk can also affect the investment in individual securities. If you invest in a company that is dependent on exporting its product and the currency where the goods are manufactured appreciates, it will affect the profitability of the company. Similarly, depreciation of a local currency will increase the cost of imports.

A6 Liquidity risk

This is the risk which is faced by investors when they are forced to sell a security at a price below its fair value often due to lack of liquidity. Asset classes such as private equity and property can be particularly illiquid.

A7 Event risk

Event risk is similar to default risk and refers to the issuer of a security being unable to pay interest or repay capital due to a major unexpected event such as a natural disaster, a corporate change such as a takeover or a regulatory change.

It also includes natural catastrophe risk, including earthquakes, hurricanes, floods or industrial accidents.

A8 Political risk

This describes the risk that a new or changed government will have different fiscal and monetary

objectives, including a decision to make major changes to the taxation system.



Question 5.2

List six other major risks that affect investments, in addition to inflation risk.

A9 Operational risk

Operational risk factors look at risks that arise from the investment process. They include:

- settlement or counterparty risk – the counterparty to a transaction may fail to settle;
- fraud – this can be internal or external fraud including misappropriation of funds;
- misrepresentation – misleading reports and valuations;
- systems failure;
- trading – trading errors and unauthorised trading;
- staff errors; and
- regulatory risk.

B Diversification

No investment is entirely risk free. Index-linked gilts, which offer inflation protection, are considered to be the safest form of investment, while speculative unlisted shares would be considered one of the riskiest.

The most important strategy for reducing risk is diversification.



How it works

Spreading risk

The risk of holding just one company's shares is greater than the risk in holding shares in 40 companies. In the single-share portfolio, the company's failure can lead to total loss; in the 40-share portfolio the maximum potential loss from the failure of a single company is 2.5% of the portfolio. The single-company portfolio is more common than might be imagined, mainly because of employee share incentive schemes and privatisations.

The advantages of diversifying a portfolio are:

- it reduces the risk of any one particular investment;
- it spreads the opportunity for potential return across asset classes;
- it minimises the risk of the overall portfolio suffering a significant downturn; and
- it increases the possibility of stable returns through all economic cycles.

Diversification can take place on a number of levels:

- At the highest level, diversification across the main asset classes is looked at first: cash, bonds, commercial property, commodities and equities. Generally, these do not all perform in the same way, so a spread of investment within them provides a degree of protection against the main types of risk and can smooth out overall returns.
- Equity investments can also be spread across world markets. Although the correlation between markets has risen over the last decade, individual world stock markets do not necessarily follow

each other so can offer risk-reducing advantage.

- Investors can also spread their holdings across the UK market to avoid over-reliance on a particular sector. For example, a portfolio consisting of only bank shares will offer little protection if bad debt levels rise. Diversification across sectors will reduce non-systematic risk.

C Gearing

Gearing, or leverage, is borrowing money in a client's portfolio with the objective of increasing exposure to other assets, often equities. Gearing will magnify positive and negative portfolio returns.



Example 5.2

The effect of gearing

An investor has £5,000 to invest in ABC shares trading at £2.50. She is convinced that the share price is going to rise and decides to borrow an additional £2,500 to allow her to buy a total of 3,000 shares instead of the original 2,000.

A month later the share price has risen by 20% to £3.00 and the investor realises a profit of £1,500 ($3,000 \text{ shares} \times £3.00 = £9,000 - £7,500$) on her original investment of £5,000, a gain of 30%. However, if the share price had fallen by 20% to £2.00, she would have lost £1,500 or 30% of her original investment.

On top of this, there will also be a cost for borrowing the £2,500, which will reduce the gains and increase the losses.

While gearing may appear attractive to clients who are targeting high returns, the high potential returns must be balanced against the greater level of risk or volatility of returns. In many cases this level of risk will be unacceptable to clients.



Key points

The main ideas covered in this chapter can be summarised as follows:

Main types of risk

- Systematic risk is market risk whereas non-systematic risk refers to investment-specific risk.
- Inflation is a major risk for investors; particularly those invested in cash deposits or fixed-income investments which are not index-linked. Real assets such as property, equities and commodities provide some long-term inflation protection.
- Interest rate risk is measured by duration, fixed-income securities will lose value when rates rise and vice versa. Fixed-income investments are also subject to credit risk.
- Investors buying securities outside their base currency are taking on currency risk.
- Other risks are liquidity risk, event risk, political risk and operational risk.

Diversification

- Diversification refers to combining investments in a way that reduces the overall risk of a portfolio.

- Diversification can be carried out at asset class or geographic level or by holding a diversified portfolio of securities within a single market.

Gearing

- Gearing increases risk by magnifying losses or gains made in a portfolio when the underlying security price moves.



Question answers

5.1 An investor might consider:

- index-linked gilts; and
- assets that can provide long-term growth such as equities, property, infrastructure or commodities which have generated positive real returns in the long term.

5.2 The other major risks covered in this chapter are:

- interest rate risk;
- credit risk;
- currency risk;
- liquidity risk;
- event risk; and
- political risk.



Self-test questions

1.	Is inflation usually a major consideration for short-term investment?
2.	What are the main risks of which an investor should be aware of when investing in a UK corporate bond?
3.	Explain the five different types of credit risk.
4.	If an investor borrows 25% of the cost of an investment, how much do they lose, in percentage terms, if the value of the investment falls by 10%?

You will find the answers at the back of the book

6 Characteristics, risks, behaviours and tax considerations of investment products

Contents

6.1: Indirect investments – unit trusts, OEICs and investment trust companies

6.2: Other indirect investments including life assurance based products

6.1: Indirect investments – unit trusts, OEICs and investment trust companies

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Learning objectives

After studying this chapter, you should be able to:

- describe and analyse the characteristics, inherent risks, behaviours and tax considerations of unit trusts, OEICs, offshore funds and investment trusts; and
- explain the advantages and disadvantages of direct investment in securities and assets compared with indirect investment through collectives and other products.

Introduction

In this chapter we will discuss, in detail, the characteristics of a range of indirect investments, looking at characteristics such as their tax treatment and risks.



Key terms

This chapter features explanations of the following ideas:

Approved securities	Authorised corporate director (ACD)	Buying/offer price	Capital structure
Charges	Classes of shares	Closed-ended funds	Collective investments
Depository	Dividends and taxation	Equalisation	Forward or historic pricing
Gearing	Income allocation and distribution	Investment Association	Investment trusts
Multi-manager products	Offshore funds	Offshore investment companies	Open-ended funds
Open-ended investment company (OEICs)	Portfolio diversification	Reporting and non-reporting funds	Selling/bid price
Single pricing	Unit trusts	Undertakings for collective investment in securities (UCITS)	

A Collective investment schemes

Collective investment schemes are popular with investors for the following reasons:

- they offer a good way to invest small sums of money, because the investor's cash can be 'pooled' into a much larger fund;
- professional fund managers make the underlying investment decisions;
- an investor can achieve a balanced portfolio because the fund managers invest in a spread of investments;
- they offer the ability to pursue particular objectives or specialise in particular markets that an investor might otherwise avoid, e.g. income or growth funds, Far Eastern funds; and
- the individual investor's risk is reduced by the wide spread of investments in the underlying portfolio.



Pooling of resources

The pooling of resources enables the scheme to invest in a wide spread of investments at a lower cost than could have been achieved by individuals acting on their own. Investors buy and sell units or shares in the scheme and not the underlying investments of the fund.

B Units trusts and OEICs: general characteristics

Unit trusts and open-ended investment companies (OEICs) are popular collective investments and are often referred to as **funds**.

Table 6.1: Characteristics of unit trusts and OEICs

They have the following characteristics:	<ul style="list-style-type: none"> • they allow the individual investor to participate in a large portfolio of shares with many other investors;
	<ul style="list-style-type: none"> • units or shares are sold to investors, each unit representing a small but equal fraction of a portfolio of perhaps 50 or 100 different shareholdings;
	<ul style="list-style-type: none"> • the assets of a unit trust are held for investors by trustees and are invested by managers;
	<ul style="list-style-type: none"> • the assets of an OEIC are held by an independent depositary; and
	<ul style="list-style-type: none"> • there is generally an initial charge which covers setting up costs and also an annual management fee. Where a fund does not have an initial charge, an exit charge may be applied.

There are many different types of fund:

- very general funds, covering most markets and types of security;
- very specific funds that concentrate on a particular market sector or type of security;
- some aim for a high income;
- some look for above average capital growth; and
- the many so-called 'balanced' funds may look for a mix of both capital growth and income.

Unlike investment trusts, unit trusts and OEICs are **open-ended**. Units or shares can be created or issued when investors invest and cancelled when investors dispose of their holdings by selling them back to the fund manager. There is a direct relationship between the unit or share price and the value of the underlying investments.



Regulation

The Financial Conduct Authority (FCA) regulates the sale and marketing of unit trusts and OEICs.

B1 Unit trust and OEIC sectors and categories

According to the Investment Association (IA) £872bn is managed in UK funds. There is a huge variety of funds on sale (around 2,500) and to allow investors to select a fund and make effective comparisons, they are categorised within a fund classification system of over 30 sectors. Each sector is made up of funds investing in either similar assets, the same stock market sector or in the same geographical region.

IA sector definitions

The IA categories are divided into the following broad areas:

- capital protection;
- income;
- growth; and
- specialist funds.

<ul style="list-style-type: none">• The IA, in consultation with its members, determines the sectors.
<ul style="list-style-type: none">• Performance measurement companies such as Standard & Poor's and Lipper Ltd rank the performance of funds in each sector. The data is published in a range of weekly and monthly trade publications.
<ul style="list-style-type: none">• In general, the fund must have at least 80% or more of its assets invested in the relevant sector to be included.
<ul style="list-style-type: none">• To qualify as an income fund, each fund in the sector must achieve a yield of not less than 90% of the relevant index (eg MSCI World Index or the FTSE All Share). Funds that fail to do so will be removed from the sector.
<ul style="list-style-type: none">• The criteria for membership of a particular sector are constantly reviewed in the light of market developments and the launch of new types of funds.



Activity

Visit the IA's website: www.theinvestmentassociation.org/fund-sectors/sector-definitions.html and familiarise yourself with the categories and sectors.

B2 Investment strategy

The IA sector classifications give only a broad guide to a fund's investment activity and philosophy. Within each sector, there may be funds which invest in smaller companies, recovery situations, 'mid-cap', blue chip, ethical investments, index-tracking funds and so on.

- **Index-tracking funds**

'Index-tracking' funds aim to mirror the performance of a particular index as closely as possible. Index trackers may follow the FTSE 100, the FTSE All-Share, the S&P 500, the Nikkei 225, or any other index. If the fund is large enough, the managers may be able to replicate the component shares of the index exactly; alternatives to this include sampling (stratification) and the use of a computerised model (optimisation).

Supporters of index-tracking argue that:

- relatively few managers consistently outperform the index against which they measure their performance;
- outperformance by active managers is generally achieved by taking higher risks; and
- index-tracking funds generally make lower charges than actively managed funds.

- **Ethical funds**

There is no specific IA categorisation for ethical funds, which mostly fall into the UK All Companies or Global sectors. The funds' investment strategy has tended to divide between those that use negative screening criteria, e.g. no arms companies, and those that adopt positive criteria, e.g. selecting companies in environmentally friendly industries.

The screening process has tended to drive ethical funds away from many large capitalisation stocks. As a consequence, some funds are now considering a neutral approach, i.e. allowing investment in companies that are neither positively harmful nor positively beneficial, or more positively, in what are known as 'socially responsible companies'.



Activity

Vigeo EIRIS is a leading provider of independent research into the environmental, social and governance (ESG) performance of companies. You can find out more by visiting their website at www.vigeo-eiris.com/en.

B3 Investment risks

The risks involved vary according to the objectives of the fund:

- A gilt fund is relatively secure because of the government backing for gilts and because gilts are not generally volatile, although they can sometimes move sharply in times of changing interest rates.
- A specialist fund such as a mining fund may be considerably less secure because of the inherent volatility of the underlying shares. However:
 - the wide spread of investments held in the fund should mean that investors will be protected against the consequences of one individual share becoming worthless if a company fails; and
 - the wide spread of holdings also reduces the effect on the portfolio of dramatic gains being produced by the success of one individual share.

B4 Investment powers and restrictions

A range of rules restrict the investment powers of authorised funds. These are designed to ensure that each fund has a proper spread of investments (to spread risk) and that the investments are realisable on demand. Their features are outlined below:

- The FCA’s specialist sourcebook – Collective Investment Schemes (COLL) – sets out the rules for establishing and operating authorised schemes in the UK, including the spectrum of markets and types of securities in which funds can invest. These rules help in achieving the statutory objective of protecting consumers by laying down minimum standards for the investments that may be held. In particular, the proportion of transferable securities and derivatives that may be held is restricted if those transferable securities are not listed on an eligible market; the intention of this is to restrict investment in those that cannot be accurately valued and readily disposed of.



General limits for an individual fund

The general limits for an individual fund may also be laid out in the trust deed of a unit trust, to be monitored by the trustees and in the instrument of incorporation of an OEIC, to be monitored by the depositary.

- The trust deed must contain a statement that the fund may invest in any securities or derivatives market which is eligible under the FCA regulations. No other investment limits need be contained in the deed unless it is intended that the fund should be subject to narrower investment powers than those set out in the regulations.
- The detailed investment limits must be set out in the scheme particulars or prospectus of the fund and must be no wider than the restrictions set out in the FCA regulations. The trustee or depositary therefore monitors the investment limits to ensure the fund is being managed in accordance with the trust deed instrument of incorporation, the scheme particulars prospectus and the FCA regulations.

B5 Approved securities and eligible markets

Securities that are admitted to an official list in European Union (EU) Member States are ‘approved securities’ and managers may invest in those markets without further enquiry.

At least 90% of a securities fund must be in approved securities. Markets in non-Member States and those on which securities are not admitted to official listing, must meet certain criteria to qualify as an eligible market for a particular fund. The FCA places a duty on unit trust managers and trustees, and on the authorised corporate directors (ACDs) of OEICs, to ensure that the market is liquid and meets four other standards. These are that the market must be:

- regulated;
- operating regularly;
- recognised (e.g. by a statutory body or government agency); and
- open to the public.

The FCA requires firms to carry out an annual review of the non-EU markets they consider eligible for each fund and, if necessary, update the fund’s scheme particulars in which the eligible markets must be listed. Overseas markets may themselves impose restrictions.

B6 Diversification rules

There are rules to make sure that unit trusts and OEICs are sufficiently diversified. The FCA imposes an obligation on authorised fund managers in relation to undertakings for collective investment in securities (UCITS) schemes. UCITS schemes are investment funds established in accordance with the EU UCITS Directive and once authorised can be freely marketed to other EU Member States. They must ensure that, taking account of the investment objectives and policy of the scheme as stated in the most recently published prospectus, it aims to provide a prudent spread of risk. These diversification rules are considered in Table 6.3.

Table 6.3: Diversification rules
<ul style="list-style-type: none"> • A retail UCITS fund investing broadly in securities but which is not an index tracker is prohibited from holding more than 10% of the total value of the fund in the shares of any one company: <ul style="list-style-type: none"> ◦ the fund can invest in only four separate shareholdings to the maximum 10% holding, i.e. no more than 40% in aggregate, of holdings which exceed 5% of the fund; ◦ any other individual shareholding must not exceed 5% of the fund; ◦ in effect, the fund must have a minimum of 16 holdings. In reality, most unit trusts have a pool of between 50 and 100 shareholdings; and ◦ UCITS schemes that are established as replicating tracker funds can hold up to 20% of the value of the fund in the shares of one company and, where justified by exceptional circumstance, up to 35%.
<ul style="list-style-type: none"> • UCITS funds are also prevented from over-exposure to the fortunes of any one company or group of companies by rules that prevent them from holding more than 20% of the securities or money-market instruments issued by the same group. Additionally, where a fund management group runs a range of funds they cannot aggregate their voting shares if this allowed them to significantly influence how a company does its business.
<ul style="list-style-type: none"> • Funds investing more than 35% in government fixed-interest securities (e.g. UK gilts), issued by a single issuer are required to invest in at least six different issues of stock. No single stock holding can exceed 30% of the value of the fund.
<ul style="list-style-type: none"> • UCITS schemes can hold up to 10% of the fund's value in 'unapproved' (unlisted) securities, and up to 20% can be in units of another collective investment scheme. Non-UCITS schemes can hold up to 20% of the fund's value in unapproved securities and unregulated schemes, and up to 35% can be in units of another collective scheme. Such schemes must satisfy the same authorised criteria as the scheme making the investment and, if the former schemes are also operated by the same manager, they must be constrained to investment in a stated geographic or economic sector.
<ul style="list-style-type: none"> • UCITS schemes and non-UCITS schemes can hold warrants without limit.
<ul style="list-style-type: none"> • Other than money market funds, unit trusts hold cash for liquidity and cash flow purposes only, but may hold cash without limit during the initial offer period. Most fund managers maintain around 5% of a fund's assets in cash, although regulations impose no limit or restrictions. In practice, IA sector rules prevent funds holding more than 20% in cash.

B7 Borrowing

A retail UCITS scheme is not permitted to borrow on a permanent or continuous basis to 'gear up' its portfolio in the same way as an investment trust. However, it is able to borrow up to 10% of the value of the fund's property on a temporary basis against known future cash flows such as dividends, subject to certain conditions.

A non-retail UCITS scheme is also allowed to borrow up to 10% of the value of the fund, but on a permanent basis, rather than the temporary basis that applies to retail UCITS schemes. A qualified investor scheme (QIS) may borrow up to 100% of the net asset value of scheme property, provided arrangements are in place to make sure borrowings are repaid on demand.

B8 Authorisation of funds

Collective investment schemes that have been authorised by the FCA can be freely marketed in the UK. The detailed framework for the authorisation and operation of collective investment schemes (COLL) is contained within the specialist sourcebooks of the FCA Handbook called COLL Collective Investment Schemes and FUND Investment Funds. FUND applies to fund managers that manage alternative investment funds (AIFs) such as hedge funds and private equity funds. It sets out the requirements for AIF managers including disclosure of information to investors, reporting obligations to the FCA and implementation of risk management systems.

The FCA will only authorise schemes that are sufficiently diversified and that invest in a range of permitted assets. Whilst some collective investment schemes are authorised, others are unauthorised or unregulated funds. The FCA now refers to all unregulated COLLs as unregulated collective investment schemes. These unauthorised vehicles are perfectly legal, but their marketing must be carried out subject to certain rules and, in some cases, only to certain types of investor.



Reinforce

The terms UCIS and UCITS are very similar and so are easily confused. You should ensure that you are clear about the difference:

- UCITS – is a scheme that meets EU requirements and once authorised can be marketed to retail investors across Europe. For example, the largest fund management groups have funds that are set up in Luxembourg (or another centre in Europe) and are bought and sold every day by investors in the UK.
- UCIS – is an unregulated scheme and therefore cannot be marketed to retail investors in the UK.



Useful website

See the FCA Handbook at www.handbook.fca.org.uk/handbook for the COLL and FUND sourcebooks online

UCIS are described as unregulated because they are not subject to the same restrictions as regulated schemes regarding their investment powers and how they are run. As a result, there may be a greater risk of loss to the client and so they are generally considered a higher risk investment. They may also not be covered by the Financial Services Compensation Scheme (FSCS).

The FCA refers to UCIS as a type of non-mainstream pooled investment (NMPI) and in June 2013 banned their promotion to the majority of UK retail investors. Instead, promotion of these riskier and often complex fund structures is restricted to sophisticated investors and high net-worth individuals.

The rules came into effect on 1 January 2014.

Investments considered as	The following investments are subject to marketing restrictions:
----------------------------------	--

NMPIs	<ul style="list-style-type: none"> • units in QIS; • traded life policy investments; • units in UCIS; and • securities issued by special purpose vehicles (SPVs) pooling investment in assets other than listed or unlisted shares or bonds.
Investments not considered as NMPIs	<p>A number of products fall outside of the marketing restrictions. These include:</p> <ul style="list-style-type: none"> • exchanged-traded products; • overseas investment companies that would meet the criteria for investment trust status if based in the UK; • real estate investment trusts (REITs); • venture capital trusts (VCTs); • enterprise investment schemes (EIS) and seed enterprise investment schemes (SEIS), unless structured as UCIS; and • SPVs pooling investment primarily in shares and bonds.

Firms still need to ensure promotional communications about these products are fair, clear and not misleading. If advice is given, they must ensure any recommendation to invest is suitable to the client.


The EU Transparency Directive

The **Transparency Directive** is EU legislation that was written into UK law in January 2007. It provides a framework to govern the preparation of prospectuses for public offers of securities and for the admission of securities to trading on regulated markets.

Its key innovation was the creation of a passport across the EU’s capital markets, allowing a prospectus approved in one Member State to be valid across the EU. The Transparency Directive sets out ongoing disclosure requirements that issuers must make once their securities are admitted to trading. It also sets out rules that impose notification requirements on both issuers and investors in relation to the acquisition and disposal of significant shareholdings in companies.

The directive is designed to promote prompt and fair disclosure of relevant information to the market and sets out specific sets of circumstances in which an issuer can delay public disclosure of inside information.

In 2013, the Council of the EU adopted the proposal for a directive to amend the Transparency Directive to make regulated markets more attractive for raising capital for small- and medium-sized issuers by simplifying certain obligations. Implementation of the amended directive took place on 26 November 2015.



Useful website
 For more information, visit the London Stock Exchange Group website:
<http://bit.ly/2sSFcRN>

The Alternative Investment Fund Managers Directive (AIFMD)

The **AIFMD** is EU legislation aimed to increase investor protection and reduce risk.

The scope of the AIFMD is broad and, with a few exceptions, covers managing and marketing AIFs in or

from the EU.

Its focus is on regulating the Alternative Investment Fund manager (AIFM) rather than AIFs.

An AIF is a ‘collective investment undertaking’ that is not subject to the UCITS regime and which includes hedge funds, private equity funds, retail investment funds, investment companies and real estate funds, among others. The AIFMD establishes an EU-wide framework for monitoring and supervising risks posed by AIFMs and the AIFs they manage, and for strengthening the internal market in alternative funds. The directive also includes new requirements for firms acting as a depositary for an AIF.

The aims of the AIFMD are as follows:

- To enhance supervisory practices among European Economic Area (EEA) competent authorities to prevent market instability and the build-up of systematic risk in the European financial system.
- To improve investor protection.
- To foster efficiency and cross-border competition.

C Unit trusts

C1 Managers and trustees

The FCA defines the roles of the unit trust manager and the trustee, whose primary objective is to protect the investor.

- This protection is ensured by a legally binding trust deed, made between the trustee and the manager. A unit trust can only be constituted by the signing of a trust deed:
 - the trustee legally holds the assets of the trust on behalf of unitholders, and
 - the manager is responsible for the day-to-day running of the unit trust.
- The manager must be authorised to conduct investment business in the UK.
- The trustee must be regulated by the FCA.
- To be marketed publicly in the UK, the unit trust must be authorised by the FCA.

C1A The trustee

The trustee is usually a large bank or one of the major insurance companies. Trustees are formally required to be independent from the management group.

The trustee’s role

The key role of the trustee is to ensure that the investors’ interests are protected by:

- Checking that the manager’s actions are in line with the regulations, the trust deed and the scheme particulars.
- Ensuring that the fund manager invests in accordance with the investment objectives of the fund.
 - The trustee has the ultimate power to replace the manager if the manager goes into liquidation, insolvency or receivership, or if the trustee believes that the manager is not acting in the unitholders’ best interests.
 - The trustee would have to remove the manager if a majority of unitholders voted for the

removal.

- Holding or controlling the holding of the assets, ensuring that they are safely held by a competent custodian.

The trustee is the legal owner of the trust's assets and is often the custodian for the trust's underlying securities and cash. The securities are registered in the name of the trustee, and all income is collected and held by the trustee. The trustee must report to its regulator if it is not satisfied that the trust is being managed in accordance with the regulations. In addition, the trustee's responsibilities include:

- Arranging the auditing of the trust and issuing financial statements to unitholders.
- Monitoring the calculation of unit prices, both for sale by the managers to the public and for repurchase by the managers from the public.
- Arranging meetings of unitholders.
- Setting up a register of unitholders and issuing certificates, if appropriate.
- Distributing the income of the trust to unitholders.
- Making any additional provisions necessary for the trust to be recognised as a pension scheme, or charitable scheme.



Question 6.1

Trustees of unit trusts are usually what type of organisation?

C1B The manager

The manager agrees to manage the trust in return for an annual management fee, usually between 0.5% and 1.5%, depending on the type of fund.

The manager's duties

The manager is required under the regulations to:

- be an authorised person;
- have adequate financial resources;
- manage the assets of the trust in accordance with the regulations, the trust deed and scheme particulars;
- supply information to the trustee when requested;
- maintain a record of units for inspection by the trustee; and
- notify the trustee and/or the FCA if it has breached any rules while running the trust.

The manager's functions

The manager is usually responsible for promotion, advertising, selecting investments and fund administration, but other groups may also be involved.



Subcontracting

It has become increasingly popular for a manager to subcontract administration to a specialist third-party company.

The manager may also select a third party to decide how the fund should be invested. For example, a building society may promote a fund where the investment management is contracted out to a separate

fund management company, which in turn selects a third party to handle day-to-day administration. However, in the interest of investor protection the manager retains responsibility for the actions of such providers, and for their compliance with the regulations.



Consider this...

A manager may switch trustees. The upheaval caused by such a move means that switches usually take place only when forced, say, by the acquisition of one fund management group by another.

C2 Registration

It is the duty of the trustee to establish and maintain a register of unitholders, although this is an activity it can delegate. In practice, the register is usually run by the manager or the third party administrator, although the trustee continues to be responsible for the delegated activity and will, in the interest of investors, monitor its maintenance.



Contents of the register

The register is conclusive evidence of the investor's title to the units and must contain the:

- name and address of the unitholder;
- number of units of each type held by the unitholder; and
- date on which the holder was registered.

Under FCA regulations, the manager and trustee must take all reasonable steps to ensure that the information on the register is up-to-date and complete at all times.

The trustee must make the register available for inspection by unitholders free of charge, at all times during normal office hours, although the register may be closed by the trustee for periods of not more than 30 days in any one year.

C3 Certificates

It has become increasingly common for the manager and trustee not to issue certificates. Instead, investors receive a periodic statement detailing the number of units they hold, and the value. If issued, certificates must show the:

- date;
- name of the scheme;
- names and addresses of the manager and the trustee;
- number and types of units held by the unitholder; and
- name of the unitholder.

C4 Reporting

Unit trusts are required to publish annual and half-yearly reports.

The content of the manager's report is set out in the Statement of Recommended Practice (SORP) for unit

trusts. A statement of total return (capital and income), with details and charges etc., must be shown in the notes to the accounts. Managers are allowed to issue short form accounts, provided full accounts are available for unitholders on request.

C5 Unitholder rights

Unitholder rights are protected at three levels:

- by trustees – who safeguard the fund’s assets, are the legal owners of those assets and ensure that the manager is complying with the trust deed, the scheme particulars and regulation;
- by the regulatory organisations set up under the **Financial Services and Markets Act 2000** – to ensure investor protection; and
- by the complaints and arbitration procedures – which enable unitholders to seek redress either through the regulators or through the independent ombudsman.

C6 General

The trust deed and the scheme particulars together establish the scope within which a unit trust can operate. Any material changes a manager may wish to make to the trust deed, e.g. a merger of trusts, must be approved at a meeting of unitholders held for that purpose.

- The typical trust deed sets out the management charges of a trust. If a manager wishes to raise charges unitholders have to be given reasonable notice, which must not be less than 60 days.
- A trustee who considers that unitholders are at risk has the power to remove the manager, although such an action is extremely rare.
- A manager cannot be removed without the approval of the FCA. The manager must notify the FCA of any proposal to replace the trustee.

If the management group running the trust goes into liquidation, the assets of the trust are protected by the trust structure.

C7 Taxation treatment of the unit trust fund

Authorised unit trusts are principally subject to the corporation tax regime, but only in respect of income. For investors this has the important effect of allowing annual management expenses to be offset against income other than UK equity income for tax relief purposes provided that there is sufficient interest or foreign dividends.

There are a number of important modifications to the usual corporation tax regime that apply to authorised unit trusts, mostly for the benefit of individual investors. Unit trusts do not pay tax on any capital gains nor on income or gains derived from options or futures.

Different tax regimes apply, depending on the composition of the investments in the fund.

Rates

- Funds with less than 60% of their assets in interest-bearing securities, i.e. equity funds that pay dividend distributions, pay corporation tax at 20% on income received in the form of overseas income, rent or interest. (Note that overseas income here refers to all overseas income apart from dividend income.)
- Dividends are received by a unit trust as franked investment income and flow through to dividend distributions payable by the unit trust with no tax liability.
- Funds with more than 60% of their assets in interest bearing securities, i.e. corporate bond and gilt funds pay corporation tax on the whole fund at 20%.

C8 Equalisation

A unit trust regularly receives income from the underlying investments of the fund, and this is usually distributed to unitholders half-yearly. When an investor buys units, the price of each unit includes the income that has accrued in the fund from the previous distribution date up to the date of purchase.

The first distribution a unitholder receives consists of the income that has accrued from the date of purchase up to that distribution date, together with an equalisation payment, which represents the income that was included in the price paid for the units.



Equalisation payment

The equalisation payment represents a partial refund of the original capital invested and is not subject to income tax. As it is a return of the initial price paid, it must, however, be deducted from the purchase price of the units to identify their acquisition value for CGT purposes.

The aim of equalisation payments is to:

- achieve a broad fairness between unitholders in the apportionment of the income received by a trust during its accounting period; and
- allow the same pence per unit dividend payment to be made to all unitholders, although for the new unitholder, part will be taxable and part will be tax-free.

C9 Income allocations and distributions

The net income of a unit trust must be allocated, i.e. applied for the benefit of unitholders, and is usually distributed at least annually. Most funds make distributions twice a year, some quarterly and income funds often monthly. Income may also be retained in the fund and added to the capital for the benefit of holders of accumulation units.

Income distribution vouchers detail how an allocation is broken down between franked and unfranked income and equalisation. Equity funds make a dividend distribution and bond funds make an interest distribution.

C10 Taxation treatment of the investor

Both the income tax and CGT positions need to be considered.

Income tax on distributions – dividend distributions from equity unit trusts

These are subject to income tax in the same way as dividends from shares. The first £5,000 of dividend income in this tax year is tax-free. Sums above that will be taxed at 7.5% for basic-rate taxpayers, 32.5% for higher-rate taxpayers and 38.1% for additional-rate taxpayers. Taxpayers must use self-assessment to pay any tax due.

Dividend distributions paid to trustees

When equity funds are held within a discretionary trust, the trustees are liable to pay income tax at 38.1% on the distribution received (i.e. the same rate as an additional rate taxpayer). The £5,000 tax-free dividend allowance does not apply to trustees.



Example 6.1

Unit trust position	£
Income	100.00
Less corporation tax	(20.00)
Distributable income	<u>80.00</u>

The first £5,000 of dividend income in this tax year is tax-free. For investors receiving more than £5,000 of dividend income, the position is as follows:

Non-taxpayer and basic-rate position	£
Dividend	80.00
Tax due at a rate of 7.5%	6.00

Higher-rate taxpayer position	£
Dividend	80.00
Tax due at a rate of 32.5%	<u>26.00</u>

Additional-rate taxpayer position	£
Dividend	80.00
Tax due at a rate of 38.1%	<u>30.48</u>

Interest distributions from non-equity unit trusts



Interest distributions

To pay interest distributions, a unit trust or OEIC must hold at least 60% of its investments in interest bearing investments, such as gilts and corporate bonds.

- These distributions have been paid gross since 6 April 2017.
- Since 6 April 2016, a basic-rate taxpayer has been able to earn up to £1,000 in savings income tax-free. Higher-rate taxpayers are able to earn up to £500, but there is no allowance for additional-rate taxpayers. This is called the tax-free personal savings allowance (PSA).

Interest distributions paid to trustees

When gilt and corporate bond funds are held within a discretionary trust, the trustees are liable to pay income tax at 45% on the distribution received.

Reinvestment of dividends and interest

If the dividend or interest is reinvested in the unit trust or OEIC in accumulation units, it still counts as being income for the investor. It will be subject to the same tax treatment as income that is distributed.

C11 Capital gains tax (CGT)

Internal capital gains within an authorised unit trust are exempt from tax.



Consider this...

This means that disposals of investments by the unit trust can usually be made without any tax liability.

Capital gains tax (CGT) may be payable on any profits made by a taxpayer who disposes of units. The profit is calculated in the usual way:

- the original acquisition cost is deducted from the sale proceeds;
- any losses can be deducted;
- unrelieved losses can be carried forward indefinitely;
- units held on 31 March 1982 are deemed to have an acquisition cost equivalent to their market value on that date;
- there is an annual exempt amount of £11,300; and
- the taxable gain remaining after the annual exempt amount has been deducted is taxed at 10% or 20%, depending on other income for the year.



Example 6.2

Anna invested £10,000 in the ABC unit trust in May 1988 and cashes in her holding in July 2017 for £31,522. Her gain is calculated as follows:

	£
Disposal proceeds	31,522
Less acquisition cost	<u>(10,000)</u>
Gain	21,522
Less annual exempt amount	<u>(11,300)</u>

The gain will be taxed at 10% or 20% depending on Anna's other income for the year.

Gains or losses are realised by disposing of units. Usually disposals are made by selling units, but gifts are also disposals for the purposes of CGT.

You should note that if a unitholder does receive an equalisation payment, this would be shown on their dividend voucher at the end of the first distribution period. This is treated as a return of the initial price paid and it should therefore be deducted from the acquisition price when calculating the chargeable gain on eventual disposal.



CGT planning

CGT planning consists of making disposals to use the annual exempt amount or in some cases capital losses.

A ploy used in the past to realise gains or losses without changing the units held was to sell and buy back the following day – known as ‘bed and breakfasting’. The rules now are such that a sale and repurchase within 30 days is ignored.

Bed and breakfasting is therefore no longer effective unless there is an interval of at least 30 days between the sale and repurchase, which would usually involve an unacceptable level of risk. Some factors to consider:

- Alternatives for investors who want to retain existing investments after realising a gain or loss include:
 - selling units and buying back within an individual savings account (ISA);
 - selling units and arranging for a spouse or civil partner to buy them back; or
 - selling and repurchasing another very similar unit trust.
- If an OEIC is an ‘umbrella fund’ with a number of sub-funds, a switch from one sub-fund to another is a disposal for CGT purposes. However, a ‘fund of funds’ unit trust or OEIC is exempt from CGT on switching its underlying holdings.

C12 Tax elected funds

From 1 September 2009 AIFs can elect to be treated as a tax elected fund (TEF). TEFs are required to make two types of distribution of the income they receive – a dividend and a non-dividend (interest) distribution. The intention of the TEF regime is to move the point of taxation from the TEF to the investor, so they are taxed as if they had invested in the underlying assets directly.

Under normal tax rules, income from UK dividends and most foreign dividends is exempt from corporation tax in the hands of the TEF. Any other income (such as interest) must be distributed as a non-dividend, for which the TEF will be entitled to receive a deduction up to the same amount to off-set the taxable income that would ordinarily be liable to corporation tax. UK investors are then treated as receiving distributions of UK dividend income and distributions of interest.

C13 Distributions

One of the most popular reasons for investing in unit trusts is that they can pay an income and also offer the potential for capital growth. Generally, the income largely comes from dividends on shares and interest on stock:

- The unitholder can choose the dates when income may be received by investing in a range of unit trusts with a spread of distribution dates.
- Alternatively, the income can be used to increase the unitholder's investment by way of either accumulation units or income reinvestment plans. However, the income still counts as income of the investor and is taxable in the same way as income that is distributed.
- Income is paid out net of expenses, usually including the manager's annual charge. The unitholder is sent a notification of income, including a tax voucher.



Changes made to FCA regulation

Following changes made to regulations, some unit trusts now deduct charges from the capital, thereby enhancing the quoted yield but reducing capital performance. Unit trusts that follow this practice must include a prominent statement reflecting this policy in all scheme documentation. They must also state the risk to the growth of the capital as a result.

C14 Income and accumulation units

Many trusts allow the unitholder to choose between receiving income and reinvestment by offering income and accumulation units.

Accumulation units

These add all the income produced from the underlying investments, net of any tax, into the investor's holding. Relative to income units the unit price increases to reflect the retained income.

Income units

These pay out the income of the unit trust to the investor. The price of income units (sometimes called distribution units) will therefore be lower than that of accumulation units. For instance:

- Income funds may consist solely of income units.
- Equity growth funds may only have accumulation units.
- Mixed distribution/accumulation funds also exist, in which case there will be two unit prices quoted in the press, one labelled 'Acc' or 'Accum. Units' and the other 'Inc'.
- In the absence of accumulation units, the manager may offer a facility to automatically reinvest income to buy more units, which are then added to the unitholder's investment. This has the potential disadvantage that the unitholder may pay all or part of the initial charge on the new units, but it is increasingly favoured by managers and investors.

C15 Impact of allocations on unit prices

As income comes into the fund and the accounting date approaches, the unit price rises to reflect this.

- When the accounting date is passed, the price is marked 'xd' (i.e. ex-distribution) and then the price

of income units usually falls by the amount of the income.

- The xd period may not be more than four months after the end of each annual or interim accounting period.
- If unitholders sell their units during an xd period they still get the allocation attributable to the previous period, while buyers will not.

C16 Link to ISAs

A unit trust can be held in an ISA. This allows it to benefit from the exemption from CGT on any realised gains.

- The full ISA allowance can be invested in qualifying unit trusts within a stocks and shares ISA, either by lump sum or regular savings.
- Virtually all unit trusts qualify as investments for a stocks and shares ISA. Cash funds also qualify as investments for a cash ISA.
- All UCITS schemes are qualifying investments for stocks and shares ISAs.

ISAs are covered in detail later in this chapter.

C17 Charges

There are generally no extra charges for investing in a unit trust ISA offered by the manager, beyond the usual charges that apply to the unit trusts themselves. There may be a reduced initial charge but an exit charge applies on the surrender of units within the initial period of, say, five years.

C18 Process of buying and selling

There is usually a minimum holding requirement of £500 or £1,000 in each fund, which is set by each management group. Holdings can be purchased in single or joint names.

Many groups also offer monthly savings schemes, often linked to an ISA. Savings schemes usually begin at around £50–£100 per month. There is no maximum investment limit because unit trusts are ‘open-ended’, creating or cancelling units according to demand.

Investors can buy or sell in several different ways; by phone, online, by completing an application form (to buy) or renunciation form (to sell), or by dealing through an authorised financial adviser.



Consider this...

- A deal handled over the phone is as legally binding as a written deal.
- Once the deal has been made, the management group immediately sends a contract note. This shows the fund, the number of units involved in the transaction and any other levies on the transaction.
- Investments made on an application form must usually be accompanied by the payment.
- Phone and online applications usually require payment once the contract note has been received by the client or adviser.

Investors must be supplied with a Key Investor Information Document detailing the main aspects of the

fund and the associated charges and expenses, before the transaction to purchase can be executed.

C19 Selling

To sell units, an order is placed with the management group, which will then issue a contract note. For instance:

- If the investor holds a certificate, they must sign the renunciation form on the back of the certificate and forward it to the manager.
- For non-certified holdings an investor may be required to sign a separate form of renunciation if a signed written instruction has not been sent.
- The manager is obliged to make payment no later than four business days after receipt of the signed documentation.
- Where investors only wish to sell a portion of their investment, the renunciation form should indicate how many units they wish to sell, or the amount of cash they wish to raise.
- If certificates are issued, then the management group will issue a new certificate for the holding balance.

C20 Share exchange facilities

Share exchange schemes are offered by a number of unit trust management groups. These allow investors to exchange existing shareholdings in public companies for an equivalent value in the fund's units.

A share exchange scheme can be a cheaper and simpler way of disposing of a small holding of shares than selling through a stockbroker, as the unit trust manager may offer advantageous terms to swap the shares for units:

- The unit trust manager may either accept shares in lieu of payment and absorb the shares into one of the group's funds, or dispose of the shares and apply the proceeds to buy units in a fund.
- Usually a share exchange scheme will have a minimum holding for a share and/or a minimum total value of a portfolio that it will accept. Most set a minimum at around £1,000, and prefer blue chip listed stocks to overseas and unlisted stocks.



Tax position

A share exchange does not exempt the investor from CGT considerations:

- selling shares by an exchange is a disposal for CGT purposes; and
- the investor can expect to pay tax if the gain on disposal exceeds their CGT annual exempt amount.

C21 Pricing and valuation

Each unit in a unit trust represents a proportional share of the property of the scheme. The valuation of units is achieved, in broad terms, by valuing the underlying securities and cash held by the fund, adjusting for income and charges, and then dividing by the number of units in existence. Unit trust managers are required to calculate unit prices in accordance with FCA regulations. Under COLL this means 'fair value

pricing' on a basis described in the scheme's prospectus. Managers may elect to operate under single-pricing or dual-pricing regulations.

Dual-priced unit trust features:

- For dual-priced unit trusts, the FCA formula determines:
 - the highest price at which units can be sold to investors; and
 - the lowest price at which the manager can repurchase units from investors.
- The manager may create additional units to satisfy demand or may cancel existing units redeemed from investors. In this way, a unit trust, unlike an investment trust, is 'open-ended' and can expand or contract depending on market conditions.

The manager will value the capital and income property of the scheme on a buying-and-selling basis, which will produce the creation and cancellation value of the fund. The manager will calculate the selling or bid price and buying or offer price for investors from these values. Most unit trust managers quote both prices, and the selling or buying price will be applied to the deal depending on the type of transaction:

- the investor buys units at the higher buying or offer price;
- the investor sells units back to the manager at the lower selling or bid price; and
- the difference between the prices is known as the 'bid-offer spread'. This includes the initial charge.

Single pricing features

Unit trust managers can elect for 'single pricing' using mid-market prices for the underlying investments; incoming and outgoing investors deal at the same price, with any charges being disclosed separately. It is also possible for a unit trust manager to operate swinging single prices (see [section D4](#)).

C22 The buying and selling prices calculation

Unit trust managers have to calculate unit prices according to FCA regulations. The following explains the traditional dual pricing basis.

The buying or offer price

To calculate the maximum buying price the managers:

- take the market buying value of the underlying securities at the published valuation point;
- add on the costs of buying securities in the market;
- add on all the other property of the trust, such as un-invested cash and any accrued income less tax, fees, charges and expenses;
- divide the total by the number of units issued; and
- add on the initial charge and express the price to four significant figures.



Example 6.3

Buying price calculation

Lowest market dealing offer price

Value of assets per unit, e.g.	50.0000
Add brokerage (0.25%)	<u>0.1250</u>
	50.1250
Add accrued income	<u>0.7250</u>
Creation price	50.85
Add initial charge (6%)	<u>3.051</u>
	53.901
Express to four significant figures to give the maximum buying or offer price per unit	53.90p

Selling or bid price

To calculate the minimum price at which the managers will buy back the units, the managers:

- value the underlying securities at the best market selling prices;
- deduct the dealing costs that would be incurred if the securities were to be sold;
- add in any un-invested cash;
- add any accrued income after deduction of any annual management fees, trustees' fees, audit fees and outstanding tax;
- divide the total by the number of units in issue; and
- express to four significant figures.



Selling or bid price

This is also the 'cancellation price' receivable by the manager from the fund if they choose to cancel units they have repurchased.



Example 6.4

Selling price calculation

Highest market dealing bid price		p
Value of assets per unit, say	49.0000	
Subtract brokerage (0.25%)	<u>(0.1225)</u>	
	48.8775	
Add accrued income	0.7250	
	49.6025	

Bid-offer spread

The bid-offer spread is the difference between the buying and selling prices, expressed as a percentage of the buying price and includes:

- dealing costs; and
- initial charges.

The bid-offer spread will vary depending on the type of assets held within the unit trust, and can be anything from a few basis points on very liquid assets such as UK gilts, to 5% or more on assets that are more difficult to buy or sell such as property, or equity investments.

This is usually in the range of 5% to 7% for equity funds, however:

- no-load index trackers (i.e. funds without an initial charge) have a narrow spread – often less than 1%;
- smaller companies and emerging markets funds have a relatively high spread because of the underlying market – the spread may be 10% or more, depending on the initial charge; and
- some cash funds have no spread at all.

There is a range of funds between these extremes. To help the fund manager control liquidity, the trust deed often gives them the right to vary the bid-offer spread to reflect market conditions.

Maximum spread

The maximum permitted spread (the difference between the maximum buying price and the minimum selling price calculated according to the FCA rules) is usually greater than the spread operated by the managers, although in practice it will depend on the demand for units:

- when one unitholder is selling and another investor wants to buy, there is no need for managers to sell any of the underlying assets and incur the dealing costs;
- if a unit trust manager is a net seller of units, the units can be priced towards the offer-end of the range; and
- if the manager is a net buyer, there will be costs and the units will be priced at the bid-end of the range.

Offer basis

If demand is high the manager will set the buying price at the offer-end of the spectrum, i.e. the full price at which it costs to create a unit plus the initial charge. This is what is meant when a trust is said to be on an 'offer basis'.

Investors coming into the fund will pay the maximum price, and investors choosing to redeem will get a relatively good price for their units, which the manager typically sets at their normal spread down from the offer price.

Bid basis

Conversely, if demand is low, and more units are being redeemed than being sold, the manager will choose a selling price at the bid-end of the range, i.e. the price of cancelling units.

In this case, the trust is priced on a 'bid basis'. Investors choosing to purchase will pay a relatively low price for their units, which the manager sets at their usual spread up from the bid price. Sellers will get the minimum price for the units they redeem.

The manager can therefore move the pricing basis of a trust in line with the level of demand. It also means that spreads quoted in newspapers are not always followed. For example, a large purchase of units could cause a trust to shift to an offer basis when it may previously have been on a bid basis.

The box

Investors buy and sell units via transactions with the manager who may hold units in the 'box'. The box may be made up of created (new) units or units that have been repurchased from investors.

'Box management' is the term used to describe the stock control mechanism applied by managers in the buying and selling of units. For instance:

- Where a fund is expanding because investors are buying units, the manager will create units at the creation price.
- Where a fund is contracting, when there are more sellers than buyers, the manager will cancel units at the cancellation price.
- The decision to hold units in the box is made by weighing up the risk of the market turning and expected future demand.

The manager can match buyers and sellers in general two-way business. A manager can sell on units at a price lower than it would be possible to create them and buy back units at a price higher than it would receive to cancel them. This benefit can be passed on to the potential buyer or seller.

Box management was at one time a significant source of profit for unit trust groups, but the holding of large boxes is now out of favour.

Single pricing

Unit trusts may quote a single price in the same way as OEICs. This should not be confused with those trusts that have the same bid and offer price, but create and cancel on a dual price basis.

The valuation point

The manager is required to carry out regular valuations of the property of the unit trust scheme under the FCA regulations.

Most unit trusts are valued daily and the 'valuation point' is the time of day that the manager carries out the valuation. The manager can decide the frequency and the time of day at which to value the fund. The frequency of the valuation must be detailed in the fund's scheme particulars.



Question 6.2

Before you leave this section, can you recall what is meant by the 'bid-offer spread'?

C23 Forward and historic pricing

Unit trusts may be priced on either a forward or historic basis. The manager can decide the basis on which it will deal:

- forward: at the price to be calculated at the next valuation point; or
- historic: at the price calculated at the last valuation point.

Forward pricing

When an investor buys on a forward pricing basis, they will pay the price that will be calculated at the next valuation point.

For cash investments, the exact number of units purchased will be unknown at the time of the deal. It is also impossible to predict the number of units that will be sold where an investor has asked to raise cash by selling units back to the manager.

On a forward pricing basis, the manager must create enough units at the valuation point to cover any deals taken since the last valuation point.

Managers operating on an historic pricing basis must move to a forward basis if the value of the trust is believed to have changed by 2% or more since the last valuation, and if the investor requests it.



Usual practice

Most managers deal on a forward basis.

Historic pricing

When working on the traditional historic pricing basis, the manager creates a stock of units at the valuation point based on the expected level of sales until the next valuation point. They then sell them at the known historic price.

If they run out of units, the manager must either move to a forward basis or continue on an historic basis, and risk losing money if the market moves unfavourably. They must create units to cover the oversold position at the next valuation point, when the creation price may rise.

The advantage of historic pricing is that small investors can be offered a known price when they place a deal.

There have been concerns, particularly for overseas equity funds, that a transaction does not fully reflect the value of the underlying shares, which may have moved substantially since the fund was last valued. This may be to the advantage or disadvantage of investors buying or selling. The FCA has addressed these concerns in COLL, with rules that require 'fair value pricing'.

C24 Charges

Investors in unit trusts may incur different types of charges as follows:

- Initial charge – this may be made when the investor first invests in a fund. It is usually a percentage of the amount invested and varies depending on the type of fund. Many funds do not now make an initial charge.
- Annual management fees – these are charged to cover the ongoing costs of the management and administration of the fund.
- Performance fees – some funds have performance fees.
- Exit charges – these are sometimes imposed instead of initial charges and are paid if the investment is sold within a certain period of time. This can be on a sliding scale over five years, at the end of which it disappears.
- Other charges can also be made such as legal and audit fees, and fees for specialist advice – these can have an impact on performance and so funds must publish an **ongoing charges figure (OCF)**, which enables investors to have a clearer picture of the total annual management charge involved in running an investment fund, together with other operating costs such as fees paid to the trustee, auditors and registrar.

For more information on charges see [chapter 8, section F2](#).

D Open-ended investment companies (OEICs)

OEICs are now the main type of open-ended fund found in the UK. They are also referred to as investment companies with variable capital (ICVCs).

The underlying legal structure is a company. However, they differ from conventional companies because they are not established under the **Companies Acts** but under different legislation. This allows them to have share capital that can expand and contract to meet investor demand:

- Individual investors' assets are pooled together in a centrally managed fund, which is then invested on a collective basis. The assets are valued on a net asset value (NAV) basis, like a unit trust.
- Funds can be established as retail and non-retail UCITS, and as QIS.
- The investors' interests in the fund are represented by shares in the fund company (very much like units in a unit trust, but without conferring beneficial ownership of the fund's assets).

The regulatory structure is broadly as follows:

- an OEIC must be authorised by the FCA if it is to be marketed in the UK;
- the OEIC is operated by its board of directors, which may comprise a single ACD;
- the assets of the OEIC must be held by an independent depositary;
- the ACD and the depositary must be authorised persons, i.e. regulated by the FCA; and
- sales and marketing are mostly regulated by the FCA through the Conduct of Business Sourcebook, and the non-life disclosure and cancellation rules apply.

In addition to the regulations which govern the establishment and conduct of the OEIC, further operating regulations are set out in the FCA's sourcebooks **FUND** and **COLL**.

D1 Product structure

An OEIC is not an investment trust or a trading company. It also differs from a unit trust in a number of ways including:

- it is a self-contained company which has its own constitutional documents and holds an annual general meeting;
- it can be a stand-alone fund, or it may take the form of an ‘umbrella’ company, with a number of sub-funds, each with its own investment objectives;
- all sub-funds of a scheme that is an umbrella must adopt the same pricing basis, i.e. forward or historic;
- it issues shares rather than units and different share classes may be issued with different charging structures and/or currencies;
- it appoints directors, including the ACD;
- an independent depositary is required to safeguard its assets and must be an authorised person;
- annual audited accounts are issued;
- the costs of its creation may be met by the fund;
- single pricing is usually used, although single or dual pricing can be adopted by the ACD; and
- like a unit trust there is a limit on borrowing, which must be temporary (for a UCITS retail fund) and not exceed 10% of the fund, so it cannot gear up like an investment trust.

D2 Fund management and administration

The OEIC equivalent of the unit trust manager is the ACD who is responsible for:

- OEIC’s compliance with investor protection requirements, as set out in FCA regulations;
- maintaining a register of shareholders;
- day-to-day management issues such as valuation, pricing and dealing;
- preparation of accounts; and
- management of investments.

The depositary

The depositary is an independent authorised person who is responsible for overseeing the management of the OEIC in relation to investor protection. For example:

- valuation, pricing and dealing in OEIC shares;
- collection of income and authorising the payment of income distributions;
- ensuring the ACD correctly exercises the investment and borrowing powers; and
- safekeeping of assets.

Reporting to holders

An OEIC’s scheme operator:

- must report to holders twice a year – once at the interim stage (unaudited) and once at the annual stage (audited);
- must produce reports that comply with the OEIC’s SORP;

- may issue short-form accounts; and
- must make available full accounts, if requested.

D3 Link to ISAs

OEICs can be held in ISAs in the same way as unit trusts.

D4 Single pricing

Investors buy shares in their chosen fund and the value of each share of the same class represents an equal fraction of the value of the securities and other assets in that fund. Thus, each share price reflects the total net value of the fund's assets related to that share class, divided by the number of those shares in issue – the NAV per share.



Example 6.5

If the OEIC holds a portfolio of securities worth £25 million and there are 10 million shares, the NAV per share is £2.50. When a fund uses single pricing there is no bid-offer spread.

The assets contained in the OEIC are valued at:

- their mid-market price where there is a market dealing spread in the assets themselves (e.g. shares); and
- the only price if that is all that is available from the relevant market.

When single pricing of shares is used, the single mid-market price makes no allowance for market dealing costs and any charges are shown separately (added or deducted) on investors' contract notes.

If an OEIC adopts a dual pricing policy, the shares will be priced in the same way as a dual priced unit trust. (See [section C22](#).)

Where single pricing is used, shares are purchased from the ACD at the single price plus an initial charge to cover sales and management expenses. For instance:

- A charge called the **dilution levy** can be added to the single price on share purchases or deducted from the price on redemptions, at the ACD's discretion. The dilution levy is paid to the OEIC to cover dealing costs and the spread between the buying and selling prices of the underlying investments. It can be applied if there are unusually large inflows or outflows of funds. The levy goes to the fund, not the managers. There are no FCA rules about the precise application of the dilution levy and practice varies greatly between funds, but the policy will be stated in the prospectus.
- Shares are redeemed or issued by the OEIC at the request of the ACD at the single price.



Dealing costs

The FCA allows OEICs and single-priced unit trusts to collect dealing costs that have been incurred as a result of investor transactions, from investors when they invest or redeem funds through a swing (adjustment) to mid-market price. This avoids the need for dilution levies. Fund managers may choose to adopt the swinging-price mechanism, or continue to use the existing dilution-levy mechanism.

Dealing and management

Dealing in OEICs is much the same as unit-trust dealing. The ACD issues a contract note for each trade and may also issue a share certificate.

OEICs are allowed to issue bearer certificates, which are convenient for some investors (e.g. non-UK domiciled shareholders).

D5 OEIC advantages

There are several advantages to OEICs:

- For the investment industry, the most important advantage is that this type of open-ended fund structure is the most widely recognised type of collective investment in Europe: OEICs are capable of being marketed internationally in a way that is virtually impossible with unit trusts.
- The OEIC regulations permit multiple share classes, which allows more flexible charging and currency structures than are possible with unit trusts; although COLL allows different classes of units or shares for all types of funds.
- The OEIC structure allows management groups to offer umbrella funds. These give the investor a choice of funds covering a range of investment objectives, each sub-fund offering or issuing a different class of share within the company. So switches between funds become a simple matter of share exchange, often at nil cost.
- From the manager's viewpoint, the umbrella structure also makes it easier to create new funds, the interest in which is represented by another share class.

D6 Taxation of OEICs

The tax position of OEICs is basically the same as for unit trusts:

- Corporation tax is payable by the OEIC on income received according to its source (interest, dividends or income from overseas), less chargeable expenses of management. As mentioned in the section on the tax treatment of unit trusts, annual management expenses can be offset against interest or foreign dividends meaning that annual charges are effectively tax relieved provided there is sufficient income.
- Dividends paid by OEICs are treated in the same way as distributions from unit trusts. Dividends are paid without deduction of tax. Interest payments from fixed-interest funds are paid gross.
- Internal gains within an OEIC are exempt from CGT.
- Personal CGT liability can arise on the sale of an OEIC or a switch in the class of shares held, where this involves a change of sub-fund.

E Unit trust and OEIC management services

E1 Multi-manager products

Most fund management groups now offer at least one multi-manager product. These allow investors to spread their money between different managers or different funds, so that they can achieve greater

diversification than if they had invested in just one fund.

The two main types of multi-manager categories are:

- **fund of funds**, which invest directly into funds managed by other managers; and
- **manager of managers funds**, which appoint specialist investment managers to look after different parts of the portfolio to a particular brief.

E1A Fund of funds

A fund of funds service invests in a selection of funds and the fund of funds can be either ‘fettered’ or ‘unfettered’:

- a fettered fund of funds only invests in funds run by the same management group; and
- an unfettered fund of funds is not obliged to invest solely in internal funds and can select from any fund and management group.

In-house fund of funds may not levy an additional annual charge on top of the fees of the underlying fund. External fund of funds usually have the additional expense of the charges of the underlying fund. This additional cost is not added to the initial or annual fees of the fund itself, but is instead taken from the fund’s assets. Most management groups are able to negotiate a rebate on these charges, or they may purchase an institutional class of unit or share that has significantly lower dealing and management costs, and no commission.

The fund of funds provider selects the individual funds and monitors their performance, with the aim of maintaining a balance between them and maximising returns. If it becomes necessary to change the exposure within the fund, a manager can do this by selling and then purchasing a new underlying fund.



Fund of funds structure

The fund of funds structure provides a CGT shelter, because switching between funds by the manager does not create any CGT liability.

E1B Manager of managers funds

Manager-of-managers funds owe their heritage to the world of institutional investment, where a fund manager appoints several investment managers, each with a specific management style, to manage a part of the portfolio:

- the overall fund manager will decide on an appropriate asset allocation for the fund;
- for each asset class an external investment manager will be chosen to run that part of the portfolio; and
- the overall fund manager is responsible for identifying competitive managers and monitoring exactly what each of them is buying and selling.

The overall fund manager, through its custodians, has direct control over the fund’s assets. If it becomes necessary to replace an existing investment manager, rather than having to sell a fund and reinvest the cash, responsibility for asset management can be assigned to a new investment manager. This avoids any difficulties in liquidating large holdings, and is a quicker and more efficient way of making the transition.



Costs of manager-of-managers fund

The costs of a manager-of-managers fund are more transparent than those of fund of funds. The additional fees for the individual investment managers are not charged separately to the fund, but are paid for from the annual management charge of the manager-of-managers fund.

E2 Platform services

The platform market in the UK has evolved rapidly over recent years from a small and relatively niche part of the financial planning landscape into a core part of many advisory propositions.

A core purpose of a platform is to offer access to a wide range of investment funds or collective investments. Different platforms offer access to different types of collective investments including ISAs, self-invested personal pensions (SIPPs), pension contracts, exchange-traded funds (ETFs) and investment bonds. The investor's holdings are all shown in a single account accessed online, enabling investors to view their total assets and asset allocations, and the up-to-date value of their investments in one place.

Since April 2014 rebate payments from product providers to platforms and cash rebates to consumers have been banned and platform-service providers must now levy an explicit platform charge.



Consider this...

From an adviser's viewpoint platforms can greatly simplify the administration of clients' portfolios, as each client's holdings can be consolidated into one account.

F Offshore funds

Offshore funds are funds established outside the UK – usually in low tax areas. The funds are collective investment vehicles structured like an OEIC.

F1 Background

Offshore funds, particularly those based in the Channel Islands and the Isle of Man, have a long history in the UK. They have been sold to UK-resident and UK-domiciled investors, and to UK expatriates and non-UK-domiciled individuals working in this country.

In recent years, a European element has emerged as 'offshore' funds have been established in the EU tax havens of Luxembourg and Dublin. These can have marketing advantages over many of their Channel Islands and Isle of Man counterparts, particularly in terms of sales within the EU.

F2 Classes of recognised schemes

The FCA recognises offshore funds for marketing purposes in the UK. They are generally categorised under three different sections of the Financial Services and Markets Act 2000:

- **Funds categorised as UCITS under EU legislation:** receive 'automatic' recognition from the FCA.
- **Certain funds in 'designated territories' (s.270):** a designated territory is one that the FCA is

satisfied gives a UK fund investor the same protection as applies to authorised unit trust investment. In practice, this means the offshore legislation, under which such funds are authorised by their home states, is similar to the rules applying in the UK, and there is a compensation scheme that is almost equal to its UK counterpart. Guernsey, Jersey, the Isle of Man and Bermuda all have designated territory status.

However, not all funds from these countries are covered by the respective regulations and FCA recognition, and there are generally three layers of fund:

- those approved by the regulator for the territory and FCA recognised (s.270 schemes);
- those approved by the regulator for the territory, but not FCA recognised; and
- those funds neither regulated by the territory, nor FCA recognised.



Classes of funds not recognised by the FCA

The two classes of funds not recognised by FCA are subject to severe marketing restrictions (see [section F5](#)).

- **Funds from outside the designated territories but recognised by the FCA in their own right:** this is on an individual basis and they are covered by s.272, the least used section.

F3 Types of scheme

With so many different offshore centres all with different legislation, there is no uniform structure to offshore funds. Indeed, the structure of the fund may only become apparent on close reading of the product literature.

F3A OEICs

The basis of most offshore funds is very different from UK unit trusts, which have a similar structure in Europe known as the Fonds Commun de Placement (FCP). Many of the offshore funds marketed into the UK are constructed in a format that is similar to an OEIC and so their structure is either an OEIC or ICVC. Investors are therefore buying shares in offshore companies, although the actual type of share held may be a participating redeemable preference share, rather than an ordinary voting share.

The most common type of investment fund in Europe is the Société d'Investissement à Capital Variable (SICAV). This is a type of investment company with variable capital and is the model for the UK OEIC.

Umbrella funds

The OEIC structure allows management groups to offer umbrella funds. These give the investor a choice of funds covering a range of investment areas, each sector fund offering or issuing a different class of share within the one company. Switches between funds become a simple matter of share exchange, often at nil cost. This once offered a tax advantage to UK investors, which no longer exists. A switch between funds is now treated as a disposal with an immediate potential tax liability for the investor.



Umbrella structure

From the managers' viewpoint, the umbrella structure makes it easier to create new funds, the interest in which is represented by another class of share. OEICs also allow managers to operate single pricing (i.e. there is no buying and selling structure), although this should not be taken to mean that initial charges disappear. In practice, 5%–6% is usually added as a sales charge.

F3B Specialist funds

With fewer restrictions on investment, offshore funds can provide investment opportunities that are not permitted for their UK unit trust counterparts. For example, some offshore funds invest directly in commodities, while others are heavily invested in the options and futures market. However, the more specialist (and speculative) funds are usually not FCA-recognised and would not satisfy UCITS rules.

F4 Undertakings for Collective Investments in Transferable Securities (UCITS)

Once an UCITS fund is authorised in its host country, it can be marketed elsewhere within the EU, subject to the marketing rules of the other country being satisfied. In the UK that means that an UCITS fund from, say, France, has to register with the FCA, and then wait for two months before it can start marketing under FCA rules.

F4A UCITS Directives

The original UCITS Directive was issued in 1985 and established a set of EU-wide rules governing collective investment schemes. Since then, further directives have been issued; UCITS III was introduced in 2003 and broadened the range of assets in which a fund can invest, and UCITS IV allowed funds with authorisation in one country to operate throughout the EU.

A UCITS fund complies with the requirements of these directives, no matter in which EU country it is established.

F5 UK marketing status

Funds with FCA recognition can be marketed in the UK in much the same way as authorised unit trusts. However, they may not be sold following cold-calling because cancellation rules do not generally apply. If the fund manager is not a member of a UK regulatory body, all advertisements, including brochures, need to be approved by a member of a suitable regulator. For funds with UK parents, this will mean that the group's UK marketing company will provide approval.

Those funds without recognition are severely restricted by the Financial Services and Markets Act 2000 regulations. In practice, they are primarily used within the UK by intermediaries for established clients with appropriate discretionary management agreements. The funds themselves cannot be publicly advertised except to investment professionals. (See [section B8](#).)

F6 Taxation treatment of investors

For UK taxation purposes, offshore funds currently fall into two categories:

- reporting funds; and
- non-reporting funds.

F6A Reporting funds

Tax treatment

Most UK resident and domiciled investors prefer reporting funds.

- The main advantages of a reporting fund are that:
 - dividends and interest are treated in the same way as UK-based funds, as previously described in this chapter; and
 - any capital gain on a sale is subject to the usual CGT rules.
- For investors to benefit from this CGT treatment, the fund must have retained reporting status throughout the period of their ownership.
- Dividends from funds constituted as companies are taxed as foreign dividends. These are subject to income tax in the same way as dividends from equities. The first £5,000 of dividend income in this tax year is tax-free. Sums above that will be taxed at 7.5% for basic-rate taxpayers, 32.5% for higher-rate taxpayers and 38.1% for additional-rate taxpayers. Taxpayers must use self-assessment to pay any tax due.
- Where an offshore fund holds more than 60% of its assets in interest-bearing securities, any distribution will be treated as a payment of interest in the hands of a UK investor and taxed at the following rates: 0% starting band, 20%, 40% and 45%. This income can be offset against an individual's PSA.
- A reporting fund does not have to distribute all of its income, but must report its income to HM Revenue and Customs (HMRC).
- The income need not be physically distributed, as the regime allows for deemed distributions or a combination of physical and deemed distributions.
- A UK investor in a reporting fund will be taxed on their share of the income of the fund, even if an actual distribution is not received.

F6B Non-reporting funds

Tax treatment

Non-reporting funds are usually roll-up funds, i.e. all income is accumulated and no dividends are paid.

The gain on any disposal, including the death of the investor, is calculated on CGT principles and is taxable in the year of encashment. However, the CGT annual exempt amount cannot be used to mitigate the tax liability and the gain is taxed as income:

- For the UK resident and UK-domiciled investor, the gain is liable to income tax at the basic rate, higher rate or additional rate, even though the gain may consist wholly or largely of dividends.
- Roll-up funds can be used to shelter accumulated income, perhaps allowing the investor to realise profits when their tax rate has dropped or they have become non-UK resident.
- For investors who are not resident in the UK, offshore income and gains will be free of UK tax, but possibly taxed in their country of residence.
- Investors who are UK resident, but not UK domiciled, are taxed on an arising basis on all UK or non-UK income and capital gains as they arise. They are only taxed on the remittance basis if they fall into an excepted category or they pay the remittance basis tax charge.
- Non-domiciled investors gain inheritance tax benefits by investing offshore. Their IHT liability is based only on their UK assets, so offshore funds will escape the UK IHT net.



A gain made on a non-reporting fund is calculated using CGT rules but actually taxed as income.

Income tax rates are higher than CGT rates and the CGT annual exempt amount cannot be used.



Question 6.3

Do most UK investors prefer reporting or non-reporting funds? Why is this?

F7 Taxation treatment of funds

Although offshore funds are based in tax havens, the funds are not completely free of tax as the following demonstrates:

- If an offshore fund invests in equities, the dividends will usually be subject to a non-reclaimable withholding tax. This is a minor inconvenience where investment is in low-yielding markets but is a more significant loss in higher-yielding markets.
- Investments in fixed-interest securities will generally yield tax-free income because the funds will choose securities, such as Eurobonds or gilts, which pay income gross. For the UK resident investor, offshore fixed-interest funds are generally more tax-efficient than offshore equity funds.



Taxation of offshore funds

The offshore funds may also be subject to a small amount of tax. For example, Jersey funds are subject to a small flat annual corporation tax charge, whilst under current legislation Luxembourg funds are subject to a tax of 0.05% per annum based on the amount invested at the end of each calendar quarter.

F7A European Union Savings Directive (ESD)

The European Savings Directive (ESD) has, since 2005, allowed tax administrations better access to information on private savers. The EU Directive 2003/48/EC was repealed by the European Council on 10 November 2015 following a strengthening of measures to prevent tax evasion. An overlap had developed with other legislation adopted at the end of 2014 and the repeal eliminates that overlap.

EU Directive 2003/48/EC required the automatic exchange of information between Member States on private savings income. This enabled interest payments made in one Member State to residents of other Member States to be taxed in accordance with the laws of the state of residence. In the UK, HMRC receive information about the savings income that individuals receive from abroad from the tax authority of the country where the income is paid. They will then compare that information with the information declared by the investor. Under the directive, most EU Member States exchange information on savings held by non-residents. However, a number of territories operate a withholding tax on savings income instead of exchanging information. For EU residents, the withholding tax is currently deducted at source at a rate of 35%. Any withholding tax that is deducted under the Directive may be offset against other tax the individual has to pay, or can be reclaimed from HMRC if it exceeds their total UK income and CGT liability.

This directive was last amended in March 2014 to reflect changes to savings products and developments in investor behaviour since 2005. The repeal meant that the 2014 amendments were not transposed by Member States

The repeal was as a consequence of the adoption by the council in December 2014 of Directive 2014/107/EU amending provisions on the mandatory automatic exchange of information. This directive implements the July 2014 Organisation for Economic Co-operation and Development's (OECD) Global Standard on automatic exchange of financial account information within the EU with a scope covering not only interest income, but also dividends and other types of capital income. Directive 2014/107/EU came into force on 1 January 2016 and is generally broader in scope than Directive 2003/48/EU.

F8 Underlying investments

In many ways the underlying investment spread of overseas funds mirrors that of UK unit trusts. A quick look through the categories covered in the financial press reveals that many offshore fund sectors are also to be found among authorised unit trusts.

F8A Equities

There is a spread of UK and international equity funds, although UK funds do not generally play the predominant role they do onshore. Other characteristics are:

- withholding taxes generally means that the investment emphasis of equity funds tends towards growth rather than income;
- as the funds are targeted at a wide range of overseas investors, the international equity choice is extensive; and
- as well as the general global international funds, there are single-country funds, geographical sector funds and specialist sector funds, such as technology and commodity.

F8B Fixed-interest

Many foreign investors favour bond investments and there is no shortage of offshore fixed-interest funds. The major currencies (euro, dollar, yen etc.) warrant a fund sector each, with sterling being the largest. The biggest single-bond fund sector is international fixed-interest, which covers funds investing across the world's bond markets.



Fixed-interest

Withholding tax is not generally a problem for most offshore bond funds, because they can usually invest tax-free both directly, or through the Eurobond and other international markets. As a result, income is usually a more important factor in selecting bond funds.

F8C Currencies

An offshore sector that does not have a UK unit trust counterpart is the currency fund sector. This sector has grown rapidly, offering international investors a tax-efficient and cost-effective alternative to currency deposits with banks:

- Many groups use umbrella funds for this market, with a range of sub-funds covering each of the major and some minor currencies. Some groups aiming at UK investors offer two series of funds: one reporting and the other non-reporting.
- Switching between funds is simple, quick and usually carried out at much finer exchange rates than

banks usually offer for small sums of currency. While the funds often end up depositing money back with the banks, the larger amounts they deposit mean that the interest rates they receive are typically higher than those most individuals could earn.

- In addition to single currency funds, some offshore groups also run managed currency funds, which attempt to capitalise on changes in exchange rates.

F8D Fund denomination

Most offshore funds are denominated in a currency other than sterling. However, the denomination of the fund may be driven by the target audience, rather than by specific currency considerations.

For example, whilst one Japanese fund denominated in dollars may always invest directly into Japan and never hedge currency risk, the other may hedge against the yen falling against the dollar. For the fund that does not hedge, the currency of denomination is actually irrelevant, as the investor is directly exposed to the yen. Often, the only way to discover the fund's approach to currency risk is to ask the fund managers.

F8E Specialist funds

Beyond these mainstream categories a number of specialist funds can be found investing in areas such as physical commodities, derivatives and warrants. These funds tend to fall outside what the FCA will allow to be marketed in the UK.

G Closed-ended funds/investment trust companies

Investment trust companies are among the oldest and most widely used types of collective investment. Investment trusts were first set up over 100 years ago to provide small investors who wanted to invest overseas with an opportunity to do so at a low cost, and to diminish their risk by spreading their investment over a number of stocks. They still fulfil this function today, although investment trusts are also widely held by institutions.

They are a collective investment that pools the money of investors, spreading it across a diversified portfolio of stocks and shares that are selected and managed by professional investment managers. Subject to any restrictions in their Articles of Association, investment trusts can:

- invest in any kind of company, whether its shares are quoted on a stock exchange or it is an unquoted, private company;
- provide venture capital to new firms or firms that want to expand; and
- invest in any country in the world.

There is a wide range of investment trusts offering exposure to different industries and regions of the world. They have a variety of investment objectives, ranging from security of capital with no income, to very high income with low capital security.



Question 6.4

Who do you think runs an investment trust?

G1 Main categories

The Association of Investment Companies (AIC) classifies investment trusts into various main sectors such as property, specialist and VCT sectors, based on a combination of the regional and industry focus of the portfolio. Different regions of the world and economic sectors will have varying levels of risk:

- some areas of the world are more stable than others;
- some economic sectors can be more affected by unpredictable world events, such as weather patterns; and
- overseas funds can be affected by currency fluctuations.



Activity

Visit the AIC's website: www.theaic.co.uk/ and familiarise yourself with the various sectors. Find an example of each.

G2 How investment trust companies work

Investment trusts are structured in the same way as normal companies and have a board of directors and shareholders. They:

- issue a fixed number of shares, hence they are described as **closed-ended** funds; and
- are regulated by company law and their shares are traded on the London Stock Exchange.

One of the advantages of their fixed capital structure is that managers can take a long-term view with their investments. They do not have to sell their best holdings if investors want their cash back in the way that unit trust managers are sometimes forced to do.

As public limited companies, investment trusts can borrow to 'gear' up (see [section G11](#)).

An investment trust is run by an independent board of directors that is responsible for looking after the interests of shareholders:

- the directors may employ a salaried fund manager (or managers) directly, in which case it is called a **self-managed trust**; however,
- nowadays, it is more common for the directors to employ, under contract, an external management group to undertake the day-to-day investment management and also to provide other services such as administration, registration and accountancy.



Management groups

Management groups typically provide services to a range of different trusts and are instrumental in setting up new trusts. However, they must appoint a majority of independent directors to the trusts' boards and this majority must be maintained under the FCA regulations.

The day-to-day running of the trust is in the hands of the managers, although they will usually meet with the board on a regular basis to discuss investment policy. If the board is unhappy with the progress of a trust, it can move it to another management group. Sometimes shareholders may also press for such a move to be made.

G2A Share price

Investment trust company shares are traded on the London Stock Exchange and the share price depends on supply and demand in the market. The share price published in the newspapers is the mid-market price, although dealers actually quote two prices:

- the higher, buying or **offer price** is the price at which investors can purchase shares; and
- the lower, selling or **bid price** is the price at which investors can sell shares.

The difference between the prices is known as the **market makers' spread** or **turn**. The spread varies according to the supply and demand for the shares. Large, generalist trusts have narrower spreads than smaller, specialist trusts, because there is generally more demand and more stock availability in these trusts.



Consider this...

Buying and selling shares in investment trusts is exactly the same as buying and selling any other shares quoted on the London Stock Exchange, although investors can often deal more easily and cheaply through investment trust managers themselves rather than having to use stockbrokers.

G2B Net asset value (NAV) per share

In principle, the net asset value (NAV) of an investment trust is equal to the total value of all of the investments within the trust, less any liabilities that the trust may have.



Calculating the NAV per share

It is calculated by taking:

- the total value of a trust's listed investments at mid-market prices;
- **plus** its unlisted investments as valued by the directors;
- **plus** cash and any other assets;
- **less** the nominal value of loans, debenture stock and preference shares; then
- the resulting figure is known as the **shareholders' funds**.

The NAV of an investment trust is usually expressed as an amount per ordinary share. The NAV per share is the available shareholders' funds divided by the number of ordinary shares in issue.



Example 6.6

If shareholders' funds are worth £50 million and there are 25 million ordinary shares, the NAV per share would be 200p. If an investment trust is wound up, shareholders receive the NAV of their shares, after repayment of prior charges and the payment of wind-up expenses.

Diluted and undiluted NAV

The simple approach used to calculate NAV can, however, give a misleading figure, as many investment trusts have issued warrants or loan stocks with options to convert into ordinary shares. Typically, these give warrant holders the right to subscribe for one ordinary share for each warrant that is held, at a fixed price, within a specified period of time, and allow the holders of convertible loan stock to convert into ordinary shares under specific terms and conditions.

The diluted NAV per ordinary share is calculated assuming that all of the outstanding warrants and

convertible loan stocks are exercised, something that the undiluted NAV figure ignores. The result of the holders exercising their rights would be an increase in the number of ordinary shares amongst which the assets are divided, but without a proportional increase in the value of the trust's assets.



Example 6.7

If a trust has ten million ordinary shares and two million outstanding warrants that give the holders the right to subscribe at £1 per share, and the trust's assets are worth £16 million, the diluted NAV per share is calculated as:

$$\frac{\text{Net assets plus money subscribed by warrant holders}}{\text{Number of ordinary shares in issue plus new shares issued to warrant holders}} = \frac{£16\text{m} + £2\text{m}}{10\text{m} + 2\text{m}} = £1.50 \text{ per share}$$

The undiluted NAV per share would be:

$$\frac{\text{Net assets}}{\text{Number of ordinary shares in issue}} = \frac{£16\text{m}}{10\text{m}} = £1.60 \text{ per share}$$

G2C Discounts and premiums

Over the longer term the movement in a trust's share price will reflect the progress of its investments. However, it is rare for the price to match the NAV per share exactly, since the price is set by market demand for the shares.

Discounts

When the share price is lower than the NAV per share, it is described as trading at a **discount** because shareholders are 'buying' the underlying assets at a lower price than they would pay if they purchased the same investments direct. The discount is the difference between the share price and the NAV per share, expressed as a percentage of NAV per share.



Example 6.8

For example, if the share price is 180p and the NAV per share is 200p, the discount is 10%. Discounts arise when there are more sellers than buyers of the shares. In general, most investment trust shares trade at a discount.

Premiums

If the share price is higher than the NAV per share, then the investment trust is said to be trading at a **premium**. If the share price is 210p and the NAV per share is 200p, the premium is 5%. This is rare, but can occur when there is a particularly high demand for an investment trust.



Premiums and discounts

It is not necessarily a good thing to buy shares when they are trading at a discount, or a bad thing to buy them when they are trading at a premium. It is the growth of the underlying assets that will, over time, drive the share price.

G3 Investment performance

The performance of investment trusts is usually measured over various periods on the basis of share price movements, taking into account reinvested income. This is the return to shareholders.

An alternative basis for measurement is NAV return, including reinvested income. This shows the performance of the trust's investments and is a more accurate reflection of how skillfully the investment managers have run their portfolio.

Narrowing discounts

When the popularity of an investment trust increases and demand for its shares rises, the share price performance figures can show it in a particularly favourable light. Not only can they reflect the increasing value of the trust's investments, but the narrowing of the discount helps to enhance the results. If the discount narrows during the period the investor holds the shares, it provides a better return on the share price than on the underlying assets.



Example 6.9

If at the beginning of a period an investment trust has a share price of 86p and a NAV per share of 100p, this means that it is trading at a discount of 14%, i.e.:

$$\frac{100\text{p} - 86\text{p}}{100\text{p}} \times 100 = 14\%$$

Assuming its share price rises to 141p and its NAV to 150p, this means the discount has closed to 6%, i.e.:

$$\frac{150\text{p} - 141\text{p}}{150\text{p}} \times 100 = 6\%$$

Whilst the NAV per share has appreciated by 50% from 100p to 150p, the share price has increased from 86p to 141p; and hence an investor's return has been enhanced to 64% by the closing of the discount.

Widening discounts

Widening discounts will have the reverse effect as they can reduce the gain an investor could potentially receive. Worse still, if the stock market falls and discounts widen as well, an investor's losses will be greater than the reduction in the value of a trust's investments. It should, however, be noted that if an investor is not a 'forced' seller, any loss is only a paper loss and not a 'real' loss until the shares are actually sold for cash.

Wider discounts can be regarded as buying opportunities by professional investors, who may put pressure on managers to restructure a trust or convert it to a unit trust to overcome the discount problem. Any such action, which results in the narrowing or disappearance of the discount gives investors an automatic gain.

If the discount is wide then managers may also seek to buyback some of a trust's shares to reduce the oversupply and bring about a narrowing of the discount.



If a share price is 210p and the NAV per share is 200p, are the shares said to be trading at a discount or premium? What is the discount or premium?

G4 Regulation and approval

An investment trust company must conform to regulations laid down by the Companies Acts, the FCA and HMRC.

Investment trusts themselves do not deal directly with the public. However, if a management company or subsidiary company wants to sell the trust's shares to the public through a savings and investment scheme, then it must be authorised to carry on investment business under the Financial Services and Markets Act 2000.

As a public limited company, an investment trust is formed under, and controlled by, the Companies Acts. When it is formed, the rules and objectives of the trust have to be laid down in its Memorandum and Articles of Association.

The FCA lays down a number of principles for a company seeking a listing as an investment trust, as follows:

- the investment managers must have adequate experience;
- there must be an adequate spread of investment risk;
- the company must not control, or seek to control, or be actively involved in the management of the companies in which it invests;
- the trust must not, to a significant extent, be a dealer in investments; and
- the trust must have a board that can act independently of its management.

The FCA also requires that the company must seek HMRC approval under s.842 of the **Income and Corporation Taxes Act 1988**. A company will usually want to do this anyway, as HMRC approval means that a trust will not be liable for tax on the capital gains it makes from sales of shares. To gain approval, the company must satisfy HMRC that:

- it is resident in the UK and is not a 'close' company (basically a company controlled by five or fewer persons);
- the ordinary share capital is listed on the London Stock Exchange; and
- it does not retain more than an amount equal to 15% of gross income.



Regulation and approval

Some investment companies registered offshore are managed in the UK and therefore can qualify as investment trusts. These companies are listed on the London Stock Exchange and have s.842 approval from HMRC. However, some companies marketed in the UK do not have s.842 approval and investors need to check the tax situation with the managers.

G5 Capital structure

Investment trusts are generally divided into two types:

- conventional; and
- split capital.

These reflect differences in their capital structures.

G5A Conventional trusts

Conventional investment trusts issue one main class of equity share, known as ordinary shares. These entitle investors to all of the income and capital gains produced by the trust investments, subject to any borrowing or preference shares that have a prior charge.



Conventional trusts

Conventional trusts are usually set up for an indefinite term and some are now over 100 years old.

G5B Limited life investment trusts

A number of the newer conventional trusts have started off with limited lives after which time shareholders are asked to vote on whether to wind up or continue the life of the trust, typically by extending its life for three years at a time.

The benefit to investors of a limited life trust is that it helps to reduce the discount (the difference between the share price and the net asset value).

In theory, as the winding-up date draws near, the discount will narrow because investors could obtain the full value of a trust's assets (after repayment of any prior charges, wind-up expenses etc.) if they voted to wind up the trust. However, there is no guarantee of this happening. Nevertheless, the possibility of such a vote can help to keep the investment managers on their toes.



Consider this...

It should be noted that, as with any public limited companies, shareholders can vote to wind up an investment trust at any time.

G6 Split capital investment trusts

Like a conventional trust, a split capital investment trust has one portfolio of investments that can produce both growth and income. However, it may have two, three or even four different classes of shares, which are entitled to different returns and are ranked in a particular order of priority for repayment on a winding up. The different categories are useful for investors looking for a particular type of return – growth or income, high risk or lower risk.

Some split capital investment trusts also offer 'units' which are packages of its different classes of shares that produce equivalent returns to an ordinary share in a conventional trust.

Split capital investment trusts have a limited initial life span, which is typically five to ten years. They can then be wound up and the different classes of shares repaid in order of priority, assuming sufficient assets are available.

Shareholders are not locked into the trust until the end of its life. They can buy and sell the shares of splits at any time, just like conventional trusts. However, it is important to bear in mind a trust's winding-up date, as this will influence the behaviour of its share prices.

G6A Redemption yields

The redemption yield measures the capital and income return on a particular share until wind-up. It is expressed as an annual percentage, so that it can be compared with returns on other forms of investment, such as building society deposits or gilt-edged securities.

A redemption yield of 7% on a share means that if the investor bought it at the quoted price, and held it until the company is wound up, the value would have grown by 7% each year between purchase and redemption.

Redemption yields for income, capital and other variable shares are based on assumed growth rates of – 2.5%, 0%, 2.5%, 5%, 7.5% and 10%.

The redemption yield shows the total return as an annual percentage. It assumes that the shares are bought at the current price, held until redemption, and that the assets and dividends payable (for share classes entitled to dividends) grow at the rate assumed.

The **equity redemption yield** shows a similar annual percentage rate, but bases the return on growing only the equity portion of the portfolio, holding any cash and fixed-interest holdings constant.

G6B Hurdle rates

The hurdle rate indicates the annual growth rate at which the company's investments must grow each year in the future, if they are going to be sufficient to repay each class of share at the wind-up date at either the current purchase price, the pre-determined redemption value (if applicable), or just repay the prior charges ranking before each share class. The calculation takes into account any classes of share that rank for prior payment.

The hurdle rate can be expressed in one of three ways; in relation to:

- current share price;
- pre-determined redemption value; or
- zero terminal asset value, known as wipe-out.

These hurdle rates can be found for each class of share in the Association of Investment Trust Companies Monthly Information Service. They have the following implications:

- a hurdle rate of 2%, for example, means that the company's investments must grow by 2% each year to pay either the current purchase price, the pre-determined redemption value or just wipe out the value at wind-up; and
 - a negative hurdle rate means there are already surplus assets and that total investments can decline in value by that amount each year and still leave enough to pay either the current purchase price, the pre-determined redemption value or nothing at wind-up.
-



Consider this...

It should be possible by looking at a trust's investment portfolio to make a judgment about whether the hurdle rates will be met over the remainder of the trust's life. A high hurdle rate may be difficult to achieve if the trust has a heavy weighting in fixed-interest securities or has expensive borrowings.

G6C Asset cover

Asset cover is another way of measuring the company's ability to meet or cover, from current assets, the liability to share classes with a pre-determined redemption price.

It is the ratio by which the pre-determined redemption value for a class of shares is currently covered by those assets of the company that are available for them. Any shares ranking for prior payment are taken into account first.



Asset cover

A cover of 1 means that the assets exactly cover the redemption price. A cover of 50% or 0.5 means that half of the redemption price is covered.

G6D Redemption

In practice, when a split capital trust reaches its redemption date, rather than winding it up, managers will generally offer investors a 'roll-over' investment vehicle. This will usually be a new investment trust of a similar nature into which they can transfer their investment without incurring an immediate CGT liability.

However, a cash alternative will almost always be offered to those investors who do not wish to continue.

G7 Classes of shares

Some investment trusts have complex structures, with various classes of shares offering different types of return to investors.

The main classes of share in the investment trust sector are detailed in the following sections.

G7A Ordinary shares

These are the main type of conventional investment trust share. Generally, these shares are entitled to all of the income and capital growth from the trust's investments, subject to any borrowings with a prior charge that the trust may have.

G7B Preference shares

Conventional investment trust preference shares pay a fixed dividend, which must be paid before any income is distributed to ordinary shareholders. They also have a prior claim to the assets of a company in the event of a winding up. Nowadays zero dividend preference shares are a common feature of split capital trusts.

G7C Split capital shares

Split capital trusts were originally designed in the 1960s with two classes of shares:

- **income shares**, which are broadly entitled to all of the income received by the investment trust, with a pre-determined capital return when the trust is wound up; and
- **capital shares**, which have no entitlement to any income, but receive the remainder of the assets on wind-up.

This structure has evolved over the years to include other classes of share, offering different combinations of income and capital.

<p>Zero dividend preference shares</p>	<p>Zero dividend preference shares (zeros) are found in virtually all newly-launched split capital investment trusts. They have the following characteristics:</p> <ul style="list-style-type: none"> • Limited life. With a capital return from the assets of the split capital fund. • Fixed redemption dates. Which coincide with the end of the trusts' lives, this is typically no more than ten years. As their name implies, zeros have no entitlement to income, instead they participate in the capital performance of a trust. They have preferential rights over the distribution of capital at the end of a trust's life, subject to any borrowings with a prior charge. • Issued at an initial value. Which in effect rises at a pre-determined compound annual growth rate until it reaches the final redemption value. The market price may not reflect this progress exactly. Prices and redemption yields will be influenced by general interest rates and the security of the underlying portfolio. The shares have no entitlement to any of the residual capital value of the fund. • Taxed under capital gains and not income tax rules (as no income). They are especially attractive for investors not using their annual CGT exempt amount because they can obtain tax-free returns. In the past, they have been regarded as low-risk investments as trust assets at the outset are often sufficient to cover their repayment. However, this is not guaranteed because a trust's assets may fall in value. Investors will need to check how well a trust's zeros are covered to ascertain the risk and the nature of the trust's investments.
<p>Income shares</p>	<p>There are several types of income shares that are entitled to income paid in the form of dividends. However, there can be significant differences in their capital entitlement at wind-up. It is important to distinguish between these when advice is given, because certain shares can give rise to substantial capital losses at redemption. The characteristics of income shares are as follows:</p> <ul style="list-style-type: none"> • The traditional income share gives a right to income with a fixed redemption price (often equal to its issue price), subject to sufficient assets remaining after repayment of debts and other preferred classes of share. However, the redemption price may be well below the current market price. • Some split capital issues have included income shares closer to an annuity in form, with a high income level, but only a nominal redemption amount that is far less than the issue price. For example, 1p for a 100p share. • A third, and increasingly common, type of income share is the ordinary income share. These are often found in trusts in combination with zero dividend preference shares. They have no pre-determined capital value, but receive all the income and all the surplus capital available, if any, after the holders of the zeros and any borrowings have been paid. They may also be described as income and residual capital shares. There is no guarantee how much capital, if any, will be available after the zeros and any borrowings have been paid off. These shares may be attractive to investors who want an above average income and are prepared to take risks with their capital.
<p>Capital shares</p>	<p>In general, holders of capital shares are entitled to any capital that remains once a trust has been wound up, and after all other classes of shares and borrowings have been repaid. They have no pre-determined capital entitlement or any rights to receive income, but because of the gearing effect of the other classes of shares,</p>

they provide the possibility of superior capital returns. However, gains are not guaranteed. Indeed, investors could suffer a total loss. These shares are only suitable for investors prepared to take a high risk for a potentially high return.

Package d units

Some split capital investment trust issues have bundled together ‘packages’ of capital, income and zero dividend preference shares. This creates what is the equivalent of an ordinary share of a conventional trust.

G8 Warrants

Warrants are not shares but are a right to buy shares at a fixed price at a pre-determined date or within a specified period in the future. They produce no income and are an investment with a potentially high level of risk and reward. The price of a warrant is only a fraction of the share price, but movements in the price of the warrant tend to magnify changes in the share price.

Warrants can be bought and sold on the London Stock Exchange at any time until their final exercise date. They are usually worth exercising if the holder is able to buy the shares at a discounted price. If they are held beyond expiry and not exercised, then they have no further value.

Warrant holders have no income tax liability, as they receive no dividends. They are therefore taxed under capital gains rules, with any gain in excess of the investor’s annual CGT exempt amount being subject to tax.

Most investment trust warrants are issued as ‘sweeteners’ with new investment trust share issues. Typically, one warrant is given away to investors for every five shares purchased. The difficulty with new investment trusts is that investors have to pay the NAV, plus the launch costs for the new shares issued to them. However, the investment trust will usually trade at a discount very soon after launch, creating an instant loss. The aim of the warrant is to enhance the return to the investor by offsetting the reduction in the share price.

Once issued, investors have the choice of selling the warrants separately from the shares or of retaining them to buy extra shares by exercising the warrants at a future date. However, this will not be worthwhile until the market price of the shares exceeds the ‘exercise price’.



Prospective investors

Prospective investors in a trust which has warrants in issue need to be aware that if the warrants are exercised and more shares created, there will be a dilution in the NAV per share of existing shares. The exercise of warrants will result in a greater number of shares, without a proportionate increase in the value of the trust assets. In the past, some trusts have repurchased their warrants to reduce the dilution effect.

G9 Suitability for investors

Split capital investment trusts provide investors with the opportunity to invest in different share classes to fulfil different financial needs, i.e. investors who:

- require a very high income, and who are prepared to erode their capital, can purchase annuity income shares;

- require income with some capital protection can purchase traditional income shares;
- require a combination of income and the potential for capital growth and who are prepared to accept a relatively higher level of risk, can purchase income and residual capital shares;
- do not require income, but are looking for capital growth at lower risk, can purchase zero dividend preference shares; and
- are seeking the possibility of higher than average capital growth and are prepared to take a higher risk, can purchase capital shares.

G10 Share buy-backs

A share buy-back is where an investment trust company buys its own shares. They can be used to return money to shareholders, but are more often used to tackle a company's discount. Boards of investment trusts with large discounts can initiate a programme of share buybacks to reduce the oversupply of shares.

This gives the board a greater ability to balance supply and demand and help prevent the discount widening or even to reduce it.

Trusts have to first seek the permission of their shareholders to carry out a buyback.

G11 Gearing

Investment trust managers can borrow money to buy shares and other assets if they see a good investment opportunity, but do not have sufficient free capital available to take advantage of it. This is known as financial gearing.



Gearing

Gearing is expressed as an investment trust's total gross assets divided by the net assets (shareholder's funds), multiplied by 100:

i.e.

$$\frac{\text{total gross assets}}{\text{net assets}} \times 100$$

- A figure of 100 means that there is no gearing.
- A figure of 120 means that the fund is 20% geared (20% of the total assets are borrowed funds).

Financial gearing can be implemented in a number of ways. Investment trusts can arrange long- or short-term bank loans in sterling or foreign currencies, or issue debentures, unsecured loan stock or preference shares.

The ability of trusts to gear can work to the advantage of shareholders, if the investment returns achieved with the borrowed money exceed the cost of servicing the loan.

However, if they do not exceed the cost the trust's performance will suffer. A bank may call in its loan if the assets of the trust fall too far in relation to the loan. A trust may then be forced to sell shares to repay its borrowings.

This can badly damage its performance, and trusts with high levels of gearing are thus generally regarded as a riskier investment than those without borrowings.



Use of gearing

Not all investment trusts use financial gearing, and many of those that do use it to very modest levels. The decision on whether or not to use gearing is taken by the fund manager and the board of directors. Other investment vehicles are unable to borrow to the same extent as investment trusts.

Trusts with different share classes

Split capital investment trusts may be financially geared, but they will also be geared as a result of their capital structure. The different share class priorities and their pre-determined entitlements can provide a type of gearing called structural gearing, with the different classes of shares having varying levels of risk. This has the following effects:

- returns on each class of share are affected by the entitlements of other share classes that rank for prior payment;
- number of share classes and their particular entitlements determine the level of structural gearing involved; and
- classes of shares that are lower down the order of entitlement are higher risk as a result of the capital structure.

Structural gearing is inherent in the nature of split capital investment trusts, but some also have borrowings (financial gearing).



Structural and financial gearing

Those split capital investment trusts with high levels of financial gearing, in addition to their structural gearing, will be even higher risk.



Question 6.6

If an investor borrows money to invest in equities in an investment portfolio, what is likely to happen to the size of any gains or losses?

G11A Risk warnings in respect of geared investment trusts

The FCA Conduct of Business rules state that advisers need to provide an enhanced risk warning to clients if they recommend or buy significantly geared investment trusts. The rules state that the enhanced warnings must be given if:

- an investment trust uses or proposes to use gearing as an investment strategy;
- it invests or proposes to invest in other investment trust companies that use or propose to use gearing as an investment strategy; and/or
- the overall result of the exposure to gearing is likely to subject the value of the investment trust company share to significant fluctuations compared with the underlying investment.

The definition of gearing is broad and relates to financial gearing (i.e. bank loans, debentures), structural gearing (in the case of splits) or investing in other types of geared instruments (e.g. warrants or other derivatives). It also covers additional exposure to gearing that arises if the company invests in other investment trusts, which themselves use gearing. It is therefore necessary to look at gearing in its totality,

both in the investment trust itself and in its investments, and determine whether the total effect of gearing is ‘significant’.



Consider this...

There is no precise definition of ‘significant’, but typically a conventional investment trust with no underlying or structural gearing, and with effective financial gearing in place below 30%, should not be subject to the risk warning rules. Where the enhanced risk warning is required, an adviser must bring the risks to the customer’s attention before recommending a particular transaction.

G12 Investment trust charges

The main charges that are made within an investment trust are detailed in the following sections.

G12A Annual management charge

The annual management charge pays for the external management of an investment fund, or the staff costs of a self-managed fund.

- Management charges tend to be lowest on the older, general trusts, where they are still typically under 0.5%;
- on newer, more specialist trusts, annual management charges of 1%–1.5% have become usual; and
- some trusts also have performance fees, with managers receiving an extra fee if they out-perform certain stock market indices. However, some providers are now removing these.

Management charges are generally scrutinised periodically. They may be renegotiated and are usually subject to one year’s notice of termination. They can be taken from a trust’s income or capital or both.

While average charges have risen with the launch of new trusts, they still tend to be lower than annual fees on unit trusts and OEICs.

G12B Other expenses incurred within the fund

Some expenses are incurred separately by the trust. These include items such as custody and auditors’ fees, directors’ remuneration, marketing, promotion and secretarial costs. These expenses may add another 0.2%–0.5% a year to the costs of the fund.

The resulting figure is known as the ongoing charges figure (OCF). The OCF is a single percentage figure that shows the proportion of a fund’s assets which are consumed by the annual management charge and other operating charges incurred during the period under review, usually a year.

The OCF takes into account the annual management charge and all of the other expenses of running the fund. It is a fairer and more accurate indicator of the charges and their effect on a fund’s performance than the quoted annual management charge.

Some funds still however publish a **total expense ratio (TER)**.

Table 6.6 highlights the difference between the OCF and TER.

Table 6.6: Measurement of fund charges

It is important to understand what is comprised in the various charges made by funds so that meaningful comparisons can be made.

OCF	<ul style="list-style-type: none"> • UCITs regulated funds must provide a key investor information document to investors which displays an OCF rather than the TER, as part of European regulation. • The OCF is similar to the TER but does not include performance fees, as these can vary depending on how well or badly a fund performs. • Neither the TER nor the OCF include entry or exit charges paid directly by investors, interest on borrowing, brokerage charges or dealing costs.
TER	<ul style="list-style-type: none"> • The TER consists of the annual management charge (AMC) and other charges, such as the fees paid to the trustee, depositary, custodian, auditors and registrar. • It also includes any performance fee, although this may be shown in a separate field.

G12C Extra charges made outside the fund

These are charges that usually occur at the time of the transaction, and include:

- **The spread.** The difference between the price at which an investor can purchase and sell shares;
- **Dealing charges.** Stamp duty on purchases;
- **ISA charges.** An additional charge to cover administration costs, or a withdrawal, switch or transfer fee when a trust is held in an ISA; and
- **Charges for advice.** A fee paid to a professional adviser by the client.

G13 Disclosure requirements

Providers of investment trust savings schemes and ISAs have to supply investors with a Key Investor Information Document (KIID). This contains essential information about their trusts and includes a table showing the effect of charges and expenses at the end of one, three, five and ten years. This will include any extra charge made for the savings plan or ISA wrapper.

As future investment performance is unknown, managers are required to base their projections on reasonable assumptions of future growth, supported by objective data.

The KIID allows investors to compare costs with those levied on similar investments, such as unit trusts and insurance products, which must show their charges in the same way.

G14 Dealing in investment trust shares

Investment trust shares can be bought and sold either through a stockbroker, like any other share, through online investment platforms or via regular savings schemes.

Execution-only

Investors who know which investment trust they want to buy can deal through a stockbroker on an

‘execution-only’ basis. Many will have a minimum fee and there is also stamp duty of 0.5% to pay.

Discretionary investment

Some stockbrokers offer discretionary investment management services for larger investors with, say, £25,000 or more to invest. They will select and manage a portfolio of investment trusts to meet different needs, e.g. capital growth or income. Investors are charged an annual management fee plus the costs of dealing.

G15 Savings and investment schemes

For investors with modest sums, savings and investment schemes are convenient and low cost. They cater for regular savers contributing as little as £50 per month and for investors with lump sums starting at £250. For investors who do not want income, dividend reinvestment facilities are available.

Charges

Charges vary between managers. Initial purchasing costs typically range between 0.2% and 1%, but some managers charge nothing at all for buying or selling shares through their schemes. All the investor has then to pay is stamp duty of 0.5% on a purchase.

Managers usually keep their costs down by dealing in bulk, pooling investors’ money and buying shares just once a month or once a week, although daily purchases may be made for larger lump sums.

Share exchange

As well as accepting cash into their savings and investment scheme, some managers offer attractive low cost share exchange services. They will take holdings of UK shares, realise them for cash and provide investors with investment trust shares in return.

Documentation

When purchasing shares through an investment trust manager, an advice note will be sent to the investor after an application and funds have both been received. This will confirm the purchase and show the number of shares purchased and their price. To keep costs down, shares purchased in this way are usually held in a nominee account so the investor will not receive a share certificate. Investors investing monthly receive six-monthly statements. Investors who buy shares in new issues or deal through a stockbroker will receive a contract note. Stockbrokers also tend to operate nominee accounts unless a share certificate is specially requested.

G16 Individual savings accounts (ISAs)

Most investment trust managers offer a stocks and shares ISA linked to one or more of their trusts. While some managers do not make any charge for the ISA wrapper, most levy a small initial and annual charge. This can be at a flat rate or at a percentage of the investment value, to cover the additional administration costs. All approved investment trusts can be held in an ISA.

The subject of ISAs is covered in more detail in [chapter 6.2](#) of this study text.



Appeal of investment trust ISAs

Investment trust ISAs are likely to be of most appeal to higher- and additional-rate taxpayers and those who need the CGT shelter which ISAs provide. For others, a straightforward savings scheme is likely to be a better option, unless the ISA is free of additional charges.

G17 Dividends and taxation

Investment trust dividends are paid either by cheque sent directly to investors, or transferred into an investor's bank account. If investment takes place through a savings and investment scheme, investors can opt to have the money reinvested in more investment trust shares. However, the charge for this facility and how it is organised should be investigated beforehand to make sure it is worthwhile.

G17A Taxation of investment trust companies

The taxation situation is as follows:

- Investment trusts that have been approved by HMRC are not subject to any tax on gains made from the sale of shares or other holdings in their portfolios.
- They are not subject to any additional tax on franked income (franked income is the dividend income that investment trusts receive from their shareholdings in UK companies).
- They do have to pay corporation tax on unfranked income, which is income from sources such as foreign share dividends, interest from gilts and bank deposits, and underwriting commission. However, trusts can reduce their tax liability by offsetting their own expenses – interest paid on borrowings and management fees – against the unfranked income. This means they often end up paying little or no tax.

G17B Taxation of the investor

Income and gains from investment trusts are taxed in the same way as income and gains from other shares. Their tax position is as follows:

- The first £5,000 of dividend income in this tax year is tax-free.
- Sums above that will be taxed at 7.5% for basic-rate taxpayers, 32.5% for higher-rate taxpayers and 38.1% for additional-rate taxpayers.
- Investors are also liable to CGT on any profit.
- Tax is only chargeable if total gains on all disposals, after deduction of losses, exceeds an investor's annual CGT exempt amount.
- If an investment trust is held within an ISA, all dividends and capital gains are tax-free.

G17C Investment trusts investing in interest bearing assets

The Budget of 2009 introduced a new optional tax framework for investment trust companies, which allows them to invest in interest bearing assets in a more tax efficient way. The rules move the point of taxation from the investment trust to the investor, with the result that investors face broadly the same tax treatment as they would have, if they had owned the interest bearing assets directly.

- An investment trust company will not be liable to corporation tax on any interest income it receives.

- When an interest distribution is made, the income will be treated as if it were a payment of interest in the hands of the investor.

G18 Offshore investment companies

Investment companies established in countries outside the UK are not subject to UK taxes, although they may be subject to low levels of local tax in the country in which they are established.

They are also usually subject to lower levels of regulatory scrutiny and there are less onerous demands on the Board of Directors if the company is registered offshore.

G19 Investment trusts vs. unit trusts and OEICs

Unit trusts, OEICs and investment trusts have much in common, but there are certain differences that give each of them advantages and drawbacks. (See [appendix 6.2](#)).

The costs of purchasing shares in investment trusts are often lower than investing in unit trusts. For instance:

- A unit trust or OEIC may have an initial charge of up to 5%. On investment trusts, if you invest directly with the provider then buying often carries no charge, but selling may incur a flat fee. Initial charges are heavily discounted, often to zero, when investment is made through online fund platforms.
- The AMC of older investment trusts are generally considerably lower than those of most unit trusts and OEICs; but with more modern investment trusts, the annual charges are often very similar ranging from 0.5% to 1.5%.
- On balance, although investment trusts can be cheaper to invest in than unit trusts, each one should be looked at individually.

The risk (and reward) of investing in investment trusts is often said to be greater than the risk (and potential reward) of investing in unit trusts. There are several reasons for this:

- Investment trusts frequently trade at a discount to NAV. The risk is that the discount might get wider. However, if the discount narrows, the shares may outperform the trust's assets. In the case of unit trusts and OEICs, on the other hand, the price of units cannot rise or fall any further than the rise or fall in value of the underlying investments.
- Discounts can widen if the market does not like the way an investment trust is being managed and there are more sellers than buyers. However, shareholder pressures may produce an improvement in performance or even a change of manager. Investors in unit trusts have no power to bring such changes about.
- Investment trusts can borrow to invest (gearing). Unit trusts and OEICs have much tighter restrictions on their borrowing powers. In certain cases, borrowing can increase the volatility and risk profile of an investment trust. At other times it can reduce the risk, if the managers use borrowings to finance the hedging of their positions, either in the market generally or in particular securities, or in currencies.



Income from investment trusts

Investment trusts can provide higher levels of income than the equivalent unit trust or OEIC because of the discount to NAV. The same amount of money buys exposure to more securities within an investment trust with a discount to NAV, and as a consequence, a greater annual income.

There are several different types of investment trust securities which have specialist uses, such as shares in split capital trusts and warrants.

- Split capital shares divide out the investment returns from the trust to different classes of shareholders. The shares also involve different degrees of risk from lower-risk zeros to higher-risk capital shares.
- All investors in a unit trust or OEIC, on the other hand, have an equal entitlement to any income and capital gains, and bear the same amount of risk.
- There are some types of unit trusts and OEICs that do not exist in investment trust form, such as guaranteed/protected funds, where derivatives are used to protect investors against falling share prices, and there are some investment trusts that do not exist in unit trust and OEIC form, such as private equity trusts, which offer access to unquoted companies.



Key points

The main ideas covered by this chapter can be summarised as follows:

Collective investment schemes

- In a collective or packaged investment scheme, such as a unit trust or open-ended investment scheme (OEIC), investors participate in a large portfolio of securities or other assets with many other investors.
- With collective investments such as investment trusts or with-profit policies, the link is less direct.
- The pooling of resources enables the scheme to invest in a wide spread of investments at a lower cost than could have been achieved by individuals acting on their own. Investors buy and sell units or shares in the scheme and not the underlying investments of the fund.

Unit trusts and OEICs: general characteristics

- Unit trusts and OEICs are popular collective investments – often referred to as funds.
- They are categorised within a fund classification system of over 30 sectors. Each sector is made up of funds that invest in similar assets, or the same stock market sectors, or in the same geographical region
- A range of rules restrict the investment powers of authorised funds, and these are designed to ensure that each fund is sufficiently diversified.

Unit trusts

- The trustee ensures that the investors' interests are protected:

- they check that the manager's actions are in line with the regulations, the trust deed and the scheme particulars; and
 - they hold or control the holding of the assets of the fund on behalf of the investors.
- The manager manages the assets of the fund in accordance with the fund's investment objectives. They are responsible for the day-to-day running of the fund, including the promotion, investment and administration.
 - Unit trusts are required to publish annual and half-yearly reports.
 - Authorised unit trusts are principally subject to the corporation tax regime.
 - A unit trust regularly receives income from the underlying investments of the fund, and this is usually distributed to unitholders half-yearly. The first distribution a unitholder receives consists of the income that has accrued from the date of purchase up to that distribution date, together with an equalisation payment, which represents the income that was included in the price paid for the units.
 - Net income of a unit trust must be allocated (i.e. applied for the benefit of unitholders) and is usually distributed at least annually.
 - Tax position needs to be considered:
 - Investor: income tax on distributions.
 - Dividend distributions paid to trustees.
 - Interest distributions from non-equity unit trusts.
 - Interest distributions paid to trustees.
 - Reinvestment of dividends and interest.
 - CGT payable on profits made by a taxpayer who disposes of units.
 - Since 1 September 2009, AIFs can be treated as a tax elected funds (TEF).
 - One of the most popular reasons for investing in unit trusts is that they can pay an income and also offer the potential for capital growth.
 - Many trusts allow the unitholder to choose between income receipt or reinvestment by offering income and accumulation units.
 - As income comes into the fund and the accounting date approaches, the unit price rises to reflect this.
 - There are generally no extra charges for investing in a unit trust ISA offered by the manager, beyond the usual charges that apply to the unit trusts themselves.
 - There is usually a minimum holding requirement of £500 or £1,000 in each fund, which is set by each management group.
 - Most unit trust groups have now switched to non-certificated units. As it has become increasingly common for the manager and trustee to no longer issue certificates.
 - To sell units, an order is placed with the management group, which will then issue a contract note.
 - Share exchange schemes are offered by a number of unit trust management groups. These allow investors to exchange existing shareholdings in public companies for an equivalent value in the fund's units.
 - Each unit in a unit trust represents a proportional share of the property of the scheme. The valuation of units is achieved, in broad terms, by valuing the underlying securities and cash held by the fund, adjusting for income and charges and then dividing by the number of units in existence.
 - Unit trust managers have to calculate unit prices according to FCA regulations.
 - Charges cover most of the costs of managing and administering the fund, such as investment management costs, marketing costs, registration and other administration.

Open-ended investment companies (OEICs)

- An OEIC is a diversified collective investment vehicle similar to a unit trust. Like a unit trust the underlying investment area will be specified, e.g. UK equities. It is an investment company with variable capital (ICVC).
- An OEIC is not an investment trust or a trading company.
- The OEIC equivalent of the unit trust manager is known as the authorised corporate director or ACD.

- The OEIC's scheme operator must report to holders twice a year and is responsible for issuing the accounts.
- ISAs are able to hold OEICs.
- An OEIC is like other open-ended funds such as unit trusts. Investors buy shares in their chosen fund and the value of each share of the same class represents an equal fraction of the value of the securities and other assets in that fund.
 - The price of each share therefore reflects the total net value of the assets of the fund relating to that share class, divided by the number of those shares in issue – the NAV per share.
- Advantages of OEICs:
 - For the investment industry, the most important advantage is that this type of open-ended fund structure is the most widely recognised type of collective investment in Europe. OEICs are capable of being marketed internationally in a way that is virtually impossible with unit trusts.
 - The OEIC regulations permit multiple share classes, which allows more flexible charging and currency structures than are possible with unit trusts, although COLL allows different classes of units or shares for all types of funds.
 - The OEIC structure allows management groups to offer umbrella funds. These give the investor a choice of funds covering a range of investment objectives, each sub-fund offering or issuing a different class of share within the company. Switches between funds therefore become a simple matter of share exchange, often at nil cost.
 - From the manager's viewpoint, the umbrella structure also makes it easier to create new funds, the interest in which is represented by another class of share.
- The tax position of OEICs is essentially the same as for unit trusts.

Unit trust and OEIC management services

- Most fund management groups now offer at least one multi-manager product to help investors achieve greater diversification. Main types are:
 - fund of funds, which invest directly into funds managed by other managers; and
 - manager of managers funds, which appoint specialist investment managers to look after different parts of the portfolio to a particular brief.
- Fund platforms offer a variety of funds from a number of different management groups, but the decision of which funds to buy is generally left to the investor or their adviser.
 - They usually offer their own ISA wrappers, allowing investors to hold funds from a range of providers which would otherwise only be possible at additional cost, e.g. via a self-select plan.

Offshore funds

- The FCA recognises offshore funds under various sections of the Financial Services and Markets Act 2000 and this has a bearing on how they can be marketed in the UK.
- For a UK resident and UK domiciled investor, the tax benefits of holding offshore funds are marginal and based mainly on possible tax deferral.
- Offshore funds can be very useful for non-UK domiciled investors, or UK domiciled investors who are non-residents, as income is only taxed in the UK when it is remitted to the UK.

Closed-ended funds/investment trust companies

- Investment trust companies are listed on the London Stock Exchange with a number of independent market makers.
- They have independent boards, and are regulated by company law.

- As closed-ended companies they have a fixed capital structure, which has its advantages and disadvantages:
 - It means the share price is influenced by supply and demand, so it does not always exactly reflect the value of a trust's assets, which adds somewhat to the risk and potential rewards. When a trust is trading at a discount, this can provide a buying opportunity.
 - The advantage of a closed-ended company is that the investment managers can take a longer-term view of their investments. They can invest in more illiquid securities and markets because they know they will not be forced sellers.
- Unit trust and OEIC managers must be prepared to liquidate holdings if investors want their money back. However, if they are doing well they will have the benefit of regular new inflows of money for investment.
- An investment trust manager does not necessarily have to sell existing investments to purchase new investments, as they can borrow money for investment or can organise an additional share issue.
- Investment trusts offer smaller investors easy, low-cost access to a wide range of stock markets around the world.
- Unit trust managers, on the other hand, can offer cash funds and derivative-based funds.
- Different types of investment trust shares are available to meet different investment objectives.
- Some zeros can provide low-risk capital growth, while income shares can pay an above average yield.
- Most investment trust managers offer cost-effective savings and investment schemes and ISAs.
- The differences between investment trusts, unit trusts and OEICs should be considered carefully when assessing an investment portfolio.
- The investor's objectives and attitude to risk must be taken into account.
- The effect of narrowing discounts, lower costs and the ability to 'gear' an investment trust should mean that an investment trust performs better than a comparable unit trust or OEIC in a rising market.
- Investment trust managers can borrow money to buy shares and other assets if they see a good investment opportunity, but do not have sufficient free capital available to take advantage of it. This is known as financial gearing.
- Providers of investment trust savings schemes and ISAs have to supply investors with a KIID.
- Investment trust shares can be bought and sold either through a stockbroker, via a platform or through direct investment.
- Investment trust dividends are paid either by means of a cheque sent directly to investors, or transferred into an investor's bank account.
- Investment companies established in countries outside the UK are not subject to UK taxes, although they may be subject to low levels of local tax in the country in which they are established.



Question answers

- 6.1 Major banks and insurance companies.
- 6.2 The bid-offer spread is the difference between the buying and selling prices expressed as a percentage of the buying price.
- 6.3 Most UK resident and domiciled investors prefer reporting funds. The main advantages of a reporting fund are that any capital gain on a sale is subject to the usual CGT rules.
- 6.4 The board of directors runs an investment trust; this may be either as a self-managed trust or by the directors employing an external management company.

- 6.5 If the share price is 210p and the NAV per share is 200p, the shares are trading at a premium of 5%.
- 6.6 The profits or losses will be increased in proportion to the gearing ratio: for example, a gearing level of 20% will result in a 20% increase in profits or losses.



Self-test questions

1.	For an OEIC, who is responsible for establishing and maintaining the register of shareholders?
2.	What percentage of a securities fund must be in 'approved' securities?
3.	What must the unit trust register of unitholders contain?
4.	What does a UCITS certificate permit the fund manager to do?
5.	What does an equalisation payment represent?
6.	What is an investment trust?
7.	List the principles laid down by the FCA for a company seeking a listing as an investment trust.
8.	Name the two types of investment trusts.
9.	What does the redemption yield measure?
10.	What are the main characteristics of zero dividend preference shares?
11.	What is 'financial gearing'?
12.	Summarise the tax position of investment trusts and investment trust dividends.

You will find the answers at the back of the book

Appendix 6.1: Characteristics of retail and qualified investor schemes (QIS)

Fund attributes	Retail		QIS
	UCITS	Non-UCITS	
Permitted subscription.	All UK investors and EU passport.	All UK investors.	Institutional and expert investors.
Different share classes.	Yes.		Yes.
Investor relations			
Investor approval.	Fundamental changes (extraordinary resolution).		Fundamental changes (ordinary resolution).
Notification to holders.	Significant changes to be notified pre-event. Other important changes to be notified pre- or post-event.		Significant changes to be notified pre-event.
Investment and borrowing powers			
Assets.	Transferable securities, deposits, derivatives, money market instruments, collective investment scheme (shown here as CIS).	As UCITS plus gold, property and a wider range of non-UCITS CISs.	As non-UCITS plus other financial assets (precious metals and commodities contracts on regulated markets).
Prudent spread of risk. <ul style="list-style-type: none">Unapproved securities.	UCITS limits apply. <ul style="list-style-type: none">10%.	Other specified limits. <ul style="list-style-type: none">20% (aggregate with unregulated CIS).	Spread of risk per fund documents.
<ul style="list-style-type: none">Unregulated CIS.	<ul style="list-style-type: none">None.	<ul style="list-style-type: none">20% (aggregate with unapproved securities).	
<ul style="list-style-type: none">Regulated CIS.	<ul style="list-style-type: none">20% (in any one CIS).	<ul style="list-style-type: none">35% (in any one CIS).	

• Index replicating funds.	• 20–35%.	• 20–35%.	
Concentration.	10% (securities/debentures) 25% (CIS units).	n/a	n/a
Borrowing.	10% (temporary).	10% (permanent).	100% of NAV (subject to adequate cover).
Operating duties and responsibilities			
Deferred redemption.	Yes (for daily-priced schemes).		Yes.
Limited redemption.	No.	Yes (per fund documents, and subject to reasonable basis) six months maximum.	Yes (per fund documents, and subject to reasonable basis).
Limited issue.	Yes.		Yes.
Price calculation.	NAV single or dual pricing (swing price mechanism allowed).		NAV (per fund documents).
Frequency of price calculation.	At least twice monthly.	At least twice monthly (or monthly, if limited redemption arrangements).	As per fund documents.

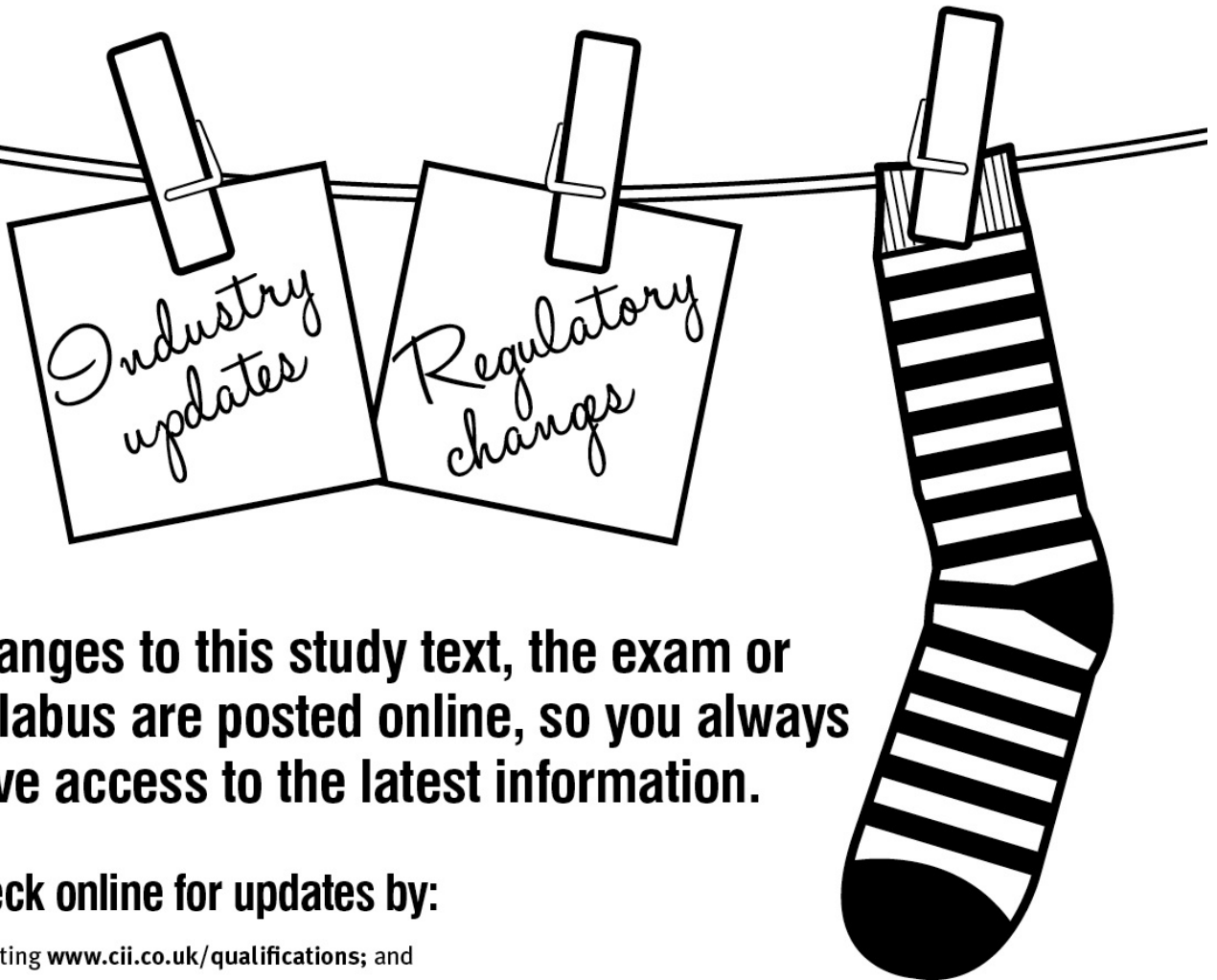
Appendix 6.2: Investment trusts, OEICs and unit trusts compared

Feature	Investment trust	OEIC	Authorised unit trust
Legal structure	Listed public limited companies governed by a Memorandum and Articles of Association. (Not a trust in the legal sense.)	Limited liability company governed by an instrument of incorporation.	Legal trust governed by a trust deed.
Stock Exchange listing required?	Yes.	Optional.	No.

Introduction	FCA listing particulars.	Prospectus.	Scheme particulars.
Nature of fund	Closed-ended, i.e. fixed number of shares in issue at any one time.	Open-ended, i.e. fund expands by the issue on demand of additional shares or contracts by the redemption on demand of shares.	Open-ended, i.e. fund expands by the issue on demand of additional units or contracts by the redemption on demand of units.
Management	May be self-managed or management may be provided under contract by an external authorised investment management firm. Has independent board of directors.	Has directors who may be individuals or companies but must include an authorised corporate director (ACD). The directors are responsible for managing the company's business by the contract with the ACD as the manager of the company. The ACD may obtain the assistance of any third party to perform its functions.	Has a manager (usually an authorised investment management firm).
Taxation	Exempt from tax on capital gains made within the company. Unfranked income charged to corporation tax at 20%, after deducting management and other administration expenses and interest cost of borrowing. Expenses cannot be offset against franked income.	Exempt from tax on capital gains made within the company. Unfranked income charged to corporation tax at 20%, after deducting management and other administration expenses (no corporation tax is payable where income is paid out as an interest distribution). Expenses cannot be offset against franked income.	Exempt from tax on capital gains made within the fund. Unfranked income charged to corporation tax at 20% after deducting management and other administration expenses (no corporation tax is payable where income is paid out as an interest distribution). Expenses cannot be offset against franked income.
Capital structure	Can issue different classes of shares, including preference shares and also debentures and warrants. Can have a split capital.	Can offer different classes of ordinary shares subject to approval of the FCA. (In the case of an umbrella OEIC, the assets of one sub-fund cannot be 'ring-fenced' from the liabilities of other sub-funds.)	Can issue income and accumulation units and different classes of units in the same way as an OEIC, e.g. retail and institutional.
Regulation	<ul style="list-style-type: none"> • Companies Act; • FCA listing rules; • Income and Corporation Taxes Act 1988, s.842; • External investment manager and Investment trust savings scheme (ITSS)/ISA operator authorised under the Financial Services and Markets Act 2000. 	<ul style="list-style-type: none"> • Structural framework provided by Treasury regulations; • authorised by the FCA; • operational issues and special corporate code administered by the FCA; • manager (ACD) and depositary authorised by FCA; • marketing regulated by the FCA. 	<ul style="list-style-type: none"> • Unit trust authorised by FCA; • manager and trustee authorised by the FCA; • marketing regulated by the FCA.
Investment restrictions	Almost unlimited range of investments, subject to company's articles and approval of board.	Acceptable investments specified by the FCA.	Acceptable investments specified by the FCA.
Method of valuation	Listed investments at market price; unlisted investments at directors' valuation.	Defined by regulation.	Defined by regulation.

Frequency of valuation	Usually monthly, although weekly and daily valuations are increasing.	Usually daily, though may be more than once a day.	Usually daily, though may be more than once a day.
Investors' holding	Shares.	Shares. (Shareholder has no beneficial interest in the assets of the OEIC.)	Units.
Pricing	A function of demand and supply for the shares: the price of the shares is not directly related to the value of the assets in the portfolio. Dealing charges are separate. Share prices usually stand below NAV. Prices are quoted at any time by a number of different independent market-makers.	Single pricing reflects the valuation of assets in the portfolio (NAV) with charges shown separately. Funds can adopt single or dual pricing.	Prices are usually set daily by managers, based on FCA regulations. Dual pricing with initial charge incorporated in offer (buying) prices. A number of trusts now have single pricing.
Purchase/sale	<ul style="list-style-type: none"> • Through a stockbroker; or • through an investment trust manager; or • through a financial adviser who has access to a manager's dealing service, via a platform. 	<ul style="list-style-type: none"> • Through the manager for lump sums and regular savings; or • through a financial adviser, via a platform. 	<ul style="list-style-type: none"> • Through the manager for lump sums and regular savings; or • through a financial adviser, via a platform.

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6.2: Other indirect investments including life assurance based products

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Learning objectives

After studying this chapter, you should be able to:

- describe and analyse the characteristics, inherent risks, behaviours and tax considerations of: life assurance based products, exchange-traded funds (ETFs) and exchange-traded commodities (ETCs), real estate investment trusts (REITs) and other property based products, venture capital trusts (VCTs), enterprise investment schemes (EISs) and seed enterprise investment schemes (SEISs), the various types of individual savings account (ISA), National Savings and Investment (NS&I) products, purchased life annuities, derivatives, hedge funds, absolute return products and structured products, and Sharia-compliant investments.
- explain the advantages and disadvantages of direct investment in securities and assets compared to indirect investment through collectives and other products.

Introduction

In this second part of chapter 6 we will continue to examine a range of indirect investments and finish by discussing the advantages and disadvantages of direct investment in securities and assets compared to indirect investment through collectives and other products.



Key terms

This chapter features explanations of the following ideas:

Absolute return funds	Bonuses	Chargeable events	Derivatives
Direct and indirect investment	Enterprise investment schemes	Exchange traded products (ETP)	Friendly society policies

	(EISs) and seed enterprise investment schemes (SEISs)		
Futures	Hedge funds	Individual savings account (ISA)	Market value reduction (MVR)
Life assurance bonds	National Savings and Investment (NS&I) products	Offshore bonds	Options
Pound cost averaging	Property based investment	Purchased life annuities	Qualifying policies
Real estate investment trusts (REITs)	Second-hand policies	Segmentation	Structured products
Taxation of life assurance policies	Unit-linked policies	Venture capital trust (VCT)	With-profit policies

H Life assurance based investments

Life assurance contracts are split into two broad types:

- those which provide protection only, such as term assurance; and
- those which have both a protection and an investment element.

A whole-of-life policy pays out the sum assured whenever death occurs, whereas under a term assurance the sum assured is only paid if death occurs within the term.

This chapter is concerned mainly with considering life assurance as an investment rather than as a protection product.

H1 Insurance vs. investment

Across the broad category of insurance products that have an investment element, the level of protection compared with the level of investment can vary.

H1A Higher protection

Certain products, e.g. mortgage endowments, incorporate a substantial element of insurance and this aspect is important where protection is required in the event of death.

Policies which have a higher insurance element carry the risk that on the death of the life assured, the life office must pay out a greater sum than the total of the premiums received and investment return made up to the date of death.



Policies with a high insurance element

If a policy has a high insurance element, more of the premium must be paid to cover this. The life office is carrying a greater risk, and consequently it expects a greater reward in the form of higher premiums.

H1B Higher investment

In contrast, life offices have developed many other products where the element of insurance is low, and the product is designed primarily as an investment, e.g. single premium bonds.

Life office policies that have the minimum life cover, perhaps 101% of the premiums paid, carry little risk in the event of death.

H2 With-profit policies

With-profit policies are available in both regular and single premium contracts, although in recent years the bulk of new investment has been in single premium bonds. Virtually all with-profit policies currently available are written on a unitised basis. The traditional with-profit contract, whilst still an important part of the traded endowment policy market, has all but disappeared in terms of new business.



Industry reviews

There have been a number of industry reviews of with-profit policies and a recurring criticism has been their lack of transparency. To look at the Financial Services Authority (FSA)'s 2010 'With-profits regime report' go to www.fca.org.uk/your-fca/documents/fsa-with-profits-report.

H2A Bonuses

Investment performance is reflected in bonuses that attach to the policy:

- Bonuses, if declared, are added to the value of the policy annually. The bonuses are based on the company's profits from its investments and are not guaranteed, but once they are added they cannot be taken away.
- Annual bonuses are generally set at a rate that the insurance company's actuary believes represents the long-term returns from the funds. In the main, they reflect the income yields on investments in a smoothed, long-term fashion. However, financial pressures have limited the scope for companies to take a long-term view.
- Final bonuses are paid when the policy matures or on death, and generally tend to represent more of the capital growth that the insurance company has made on its funds. Final bonuses are therefore more volatile and more directly affected by changes in the investment markets. Final bonuses vary and are not guaranteed.



Final bonuses

Some companies suspended final bonuses when stock market conditions were difficult.

- Insurance companies usually reserve the right to reduce the amount paid on the surrender of a policy during times of adverse market conditions. A market value reduction (MVR) is applied to unitised with-profit funds, whereas for traditional policies this will be achieved by changing the surrender value basis.

H2B Market value reduction

All offices operate MVR to protect the interests of investors remaining in the unitised with-profit funds.

- The MVR is applied at the life office's discretion to reduce the amount payable on surrenders or switches and operates in times of adverse investment conditions. For example, a stock market crash.
- Usually, the MVR does not apply on death or maturity.
- The aim of the MVR is to prevent the value leaving the fund from exceeding the value of the underlying assets.



Financial Conduct Authority (FCA) requirements

When these products are being sold, the FCA requires the bonus system and MVR to be explained properly and forbids the presentation of with-profit products as guaranteed. They should therefore, be sold as long-term investments.

H3 Conventional and unit-linked with-profit

With-profit policies are available in two main types:

- **unitised with-profit;** and
- **conventional with-profit.**

H3A Unitised with-profit policies

These are with-profit investments expressed as a unit-linked policy, where the premiums buy units in the unitised with-profit fund. The main difference from other unit-linked funds is that the unit price is guaranteed not to fall. There are two basic types of unitised with-profit funds, operating with either a fixed or variable unit price, as follows:

- Under the fixed-price system the unit price never varies. When a regular bonus is added, extra units with the same price are allocated to the policy. These extra units cannot be taken away by the life office:
 - Usually the number of units is increased daily throughout the year by a percentage of the annual bonus rate.
- Under the variable price system the unit price is increased through the addition of regular bonuses and is guaranteed not to fall.
 - The most common method of allocating the bonus is by daily increases in the unit price throughout the year.



Advantages of unitised with-profit investments

The advantages for the investor are that:

- bonus rate is declared annually in advance (but investors should be aware that this could be amended later on in the same year);
- easier to understand the current value of the investment;
- switches can be made to and from other unit-linked funds, although an MVR may apply to switches out;
- unitised with-profit policies involve the insurance company in less initial commitment of reserves than traditional with-profit policies; and
- final bonus may also be paid on death or maturity in addition to the value of the units.

H3B Conventional with-profit policies

A conventional with-profit policy has an initial sum assured that is increased by the addition of bonuses. Annual bonuses and final bonuses are declared as a percentage of the sum assured, or the sum assured plus attaching bonuses.

The characteristics of conventional with-profit policies are that:

- bonuses are declared annually in arrears;
- the investor can see the build-up of the policy in terms of the eventual proceeds, which are secured each year by the bonus declaration;
- however, investors cannot easily calculate the current value of their policies.



Example 6.10

An endowment has a basic sum assured of £6,000: bonuses declared to date are £2,500 and this year's bonus is 3% compound, i.e. £255 added to the claim value. Sometimes there is one bonus rate on the sum assured and a different rate on existing bonuses.

Unitised with-profit policies have now almost entirely taken over from their conventional counterparts. However, past performance results usually refer to conventional contracts and the traded endowment market is dominated by traditional contracts.

H4 With-profit performance

The performance of with-profit funds depends on:

- the underlying performance of the investments, which is the most important factor; and
- for some companies, the profitability of their other businesses.

The strength of the company's reserves is often measured by the size of the free asset ratio. This can allow reserves to be maintained, even in those years when the value of investments and the income from them have fallen. The companies generally try to maintain a balance between:

- retaining enough of the profits in particularly good years to smooth out the bonuses in years when investment returns are poor; and
- providing each generation of policyholders with the appropriate returns from their investments.

H5 Advantages of with-profit

With-profit policies can be seen as having the following advantages:

- They provide investors who are relatively risk-averse with some exposure to the equity markets.
- Bonuses are not directly linked to investment performance in the same way as with unit-linked policies, because it is possible for a life office to use its reserves. This produces a 'cushioning' effect which irons out the sharp rises and falls that characterise unit-linked investments.
- Over the last ten years most with-profit policies have outstripped inflation.
- In some cases they allow investors to participate in the profits of the insurance company's trading

activities.

- Ownership of a mutual life office's with-profit policies represents ownership rights in the life office itself. These should generate either additional profits or shares if the company is demutualised.

H6 Disadvantages of with-profit

A growing number of companies do not offer with-profit policies and their popularity has declined, particularly for regular savings and mortgage repayments. This is partly because they have the following disadvantages:

- They are difficult to understand and lack transparency.
- Returns depend to some extent on the insurance company's subjective judgment of long-term returns and their marketing objectives. For example, in the past some companies have increased bonus rates (especially final bonus rates) to boost past performance where the underlying investment performance might not have justified that bonus level.
- They may be inflexible and generate poor returns on early surrender or during periods when the MVR applies.

H7 Closed with-profit funds

A number of with-profit funds are now closed to new business, although they have not all closed for the same reasons, and not necessarily because the insurer is financially weak. Some have closed when the life office was taken over, or through competition from other offices. Some closed funds have performed better than open funds, while some have performed worse.

Most closed funds hold a relatively high proportion of their funds in fixed-interest securities with only a small proportion invested in equities. However, the allocation to equities is primarily dependent on the financial strength of the insurer. This has the following consequences:

- funds with a relatively high weighting in fixed-interest securities are not as likely to perform as well over the longer term as funds with a higher equity content;
- this will restrict the fund's ability to pay future bonuses; and
- where a fund is paying no annual bonus the charges of the fund will eat into the policyholder's investment.

The position of policyholders in these funds is complicated and it is extremely difficult to generalise about what they should do. Each client's circumstances are different and any decision needs to be made on an individual basis. Policyholders should consider the:

- financial strength of the insurer;
- current asset allocation of the fund;
- current bonus rate;
- long-term performance of the fund;
- current surrender value of the policy;
- penalties (if any), i.e. an MVR, for exiting the fund; and
- length of time until the end of the policy or an MVR-free encashment date.

The problem for policyholders remaining in a closed with-profit fund is that those policyholders on policy anniversaries when they will incur no exit penalties (i.e. MVR-free dates) will be taking more than their fair share of the fund, which will lead to the fund becoming considerably weaker.

Where exit penalties are at the less punitive end of the scale, policyholders have to weigh up the option of exiting the fund and reinvesting the money to get a better return.



Traded endowment market

Policyholders with regular premium endowment policies may be able to obtain a higher amount by selling their policy on the traded or second-hand endowment market as an alternative to taking the surrender value offered by the life office.



Question 6.7

State four advantages of with-profit funds.

H8 Unit-linked funds

The value of a life assurance policy can be linked to the performance of units in life company funds.

With a unit-linked policy, the premiums buy units in the fund of the investor's choice. This might be run by the life office itself, or it might be a unit trust run by the life office or another institution. It has the following characteristics:

- The value of the policy is measured by the total value of the units allocated to it.
- Immediately a policy is set up, its surrender value will be lower than the premium paid. This will be because of the difference between the buying and selling price of the units, usually 5% and/or because there is an early termination penalty.
- From then on, a policy's value depends on the performance of the fund, or funds, to which it is linked.

H9 Investment funds

Most offices have a variety of funds on offer with different risk and growth prospects. The funds most usually available are as follows:

Cash fund	<ul style="list-style-type: none"> • A cash fund is invested in the short-term money markets, such as bank deposits and Treasury bills. This should produce steady, but secure growth, and is often used to provide capital protection at a time when the outlook in other investment markets may be uncertain.
Building society fund	<ul style="list-style-type: none"> • This is invested in building society accounts, aiming to offer a return in line with the building societies' rates. The interest rate will vary from time to time but the unit price is usually guaranteed not to fall.
Gilt or fixed-interest fund	<ul style="list-style-type: none"> • Invested in UK Government gilts and other readily marketable fixed-interest securities. Some offices may also invest in listed marketable stocks of overseas governments and companies. These funds are relatively secure, owing to the underlying guarantee on government stocks, but capital values can

fluctuate.

Index-linked gilt fund

- Invested in index-linked securities issued by the UK Government. The income element and redemption value of these bonds are linked to the rate of inflation and returns are likely to be higher in times of high inflation.

Equity fund

- Invested in shares listed on the UK stock market and maybe also in convertible loan stock and overseas securities. Prices can fluctuate considerably, reflecting the fortunes of the underlying shares and the economy as a whole.

International fund

- Invested in securities listed on foreign stock markets. Some offices might also include shares in UK companies if they earn a large proportion of their profits from overseas earnings. Prices can fluctuate substantially because there may be a currency risk as well as an investment risk.

Property fund

- Invested directly in freehold and leasehold interests in commercial and industrial property, such as warehouse buildings, shopping units and office blocks. This should provide reasonable long-term performance but prices can still go down substantially. There is often a proviso that encashments or switches can be delayed for a specific period. This would be in times of difficult market conditions because of the relative illiquidity of the underlying investments. Smaller funds may invest in property company shares rather than in direct property investments.

North American fund

- Invested in securities on US and Canadian stock markets. Prices can fluctuate substantially because of currency and investment risks.

Far Eastern fund

- Invested in securities on Far Eastern stock markets. Prices can fluctuate substantially because of currency, investment and political risks.

Managed fund

- Invested in a balanced spread of equities, both in the UK and overseas, fixed-interest investments, property and cash either directly or through the other funds. The life office's investment managers vary the distribution of the investments according to the relative current attractiveness of the various markets. Usually, the objective is steady long-term growth, while avoiding undue risk. The spread of investment should reduce risk, but prices can still fluctuate.
- The Association of British Insurers (ABI) classifies these funds as follows:
 - Mixed Investment 0–35% Shares.
 - Mixed Investment 20–60% Shares.
 - Mixed Investment 40–85% Shares.
 - Flexible Investment.
- The definition for each sector shows how much flexibility the fund manager has over the range of investments in a fund. The sector name shows the minimum and maximum amount that funds in that sector may invest in shares. Funds in the Flexible Investment sector are expected to have a range of different investments although the fund manager has significant flexibility over what to invest in. There is no minimum or maximum requirement for investment in shares, so there is scope for the manager to invest up to 100% in shares if they so wish.

Ethical funds

- Some life companies offer ethical or environmental funds. The equity investments underpinning these funds are screened on various criteria. For example, some ethical funds will exclude companies involved in arms, tobacco and alcohol, whereas environmental funds may use positive selection criteria and invest in companies producing electricity from renewable energy sources.

External manager funds	<ul style="list-style-type: none"> • Most life companies offer links to funds managed by external investment managers. These may be specialist sector funds, e.g. Japan, or fall within the managed fund category. Often the life funds represent no more than a wrapper for the external manager’s unit trust or OEIC.
Manager of managers funds	<ul style="list-style-type: none"> • These funds are a variation on the external manager approach. The life company, or sometimes a third party asset allocation adviser, select specific fund managers for each investment sector within a class of funds. For example, a managed fund may have different external managers for its UK, European, US and Far East equity holdings.

H10 Unit-linked returns


The returns available on unit-linked policies depend on two main factors:

- investment performance of the funds to which they are linked; and
- exact days on which the policy is set up and cashed in.

H10A Performance

There is a significant difference between the performance of the best and worst offices, and the best and worst funds within offices:

- The more specialised the fund, the greater the chance of spectacular rises in value and also spectacular falls.
- The more broadly based a fund, the more likely it is to conform to an average return and the less likely it is to suffer a disastrous fall.




Performance of new funds
 There is some evidence to suggest that new funds tend to perform better than average in their early years because their small size tends to make dealing easier.

H10B Cashing-in – pound-cost averaging

Pound-cost averaging only works for regular premium contracts. The yield obtained from the policy depends mainly on the bid prices of units on the day the policy is cashed in.

- If unit prices are low at times during the term of the policy this can work to the saver’s benefit. When prices are low, the premiums buy more units than they would if prices were higher.
- The saver will receive a better return if prices are low for a long period and then rise just before the policy is encashed, than if the prices rise to the same eventual height but at a consistent gentle growth rate. This is because units will have been bought, on average, at a lower cost during years of low prices. This factor is known as pound-cost averaging. An example of how this could operate is shown below, using a ten-year policy for £300 a year.



Example 6.11
Case A – Prices rise at a constant rate for ten years from £1.00 to £1.90.

Year	Investment £	Unit price £	Number of units bought
1	300	1.00	300.00
2	300	1.10	272.73
3	300	1.20	250.00
4	300	1.30	230.77
5	300	1.40	214.29
6	300	1.50	200.00
7	300	1.60	187.50
8	300	1.70	176.47
9	300	1.80	166.67
10	300	1.90	157.89
Total units			2,156.32

Total unit value 2,156.32 @ £1.90 = £4,097.01

Case B – Prices fluctuate, going down and up for ten years between £1.00 and £1.40.

Year	Investment £	Unit price £	Number of units bought
1	300	1.00	300.00
2	300	0.50	600.00
3	300	0.70	428.57
4	300	0.60	500.00
5	300	0.90	333.33
6	300	1.10	272.73
7	300	0.90	333.33
8	300	1.20	250.00
9	300	1.10	272.73

Total units

3,504.98

Total unit value 3,504.98 @ £1.40 = £4,906.97

All charges, etc. have been ignored for simplicity, but the cases clearly show that fluctuating prices need not damage the overall return and may well enhance it.

H11 Investment appeal of life assurance

Many of the funds are broadly equivalent to those that are available from unit trusts and OEICs. Indeed, some funds are unit trusts or OEICs that are held by life assurance offices. Nevertheless, there are several types of funds that are more or less unique to life assurance policies:

- with-profit funds;
- guaranteed income and growth bonds;
- property funds with asset holdings of property rather than property shares; and
- mixed or managed funds, which provide a balance of equities, fixed-interest investments, unit trusts, property and cash.

Switching

Switching tends to be more frequent on bonds than on regular premium policies. An attraction of unit-linked policies is that switches can be made between funds at little or no cost and without the policyholder incurring any personal tax liability at the time of the switch. Most offices offer two free switches with any subsequent switches chargeable.

H12 Saving from income

The number of people using qualifying life policies as a means of saving from income has steadily declined. The decline reflects regulatory pressure to recommend tax efficient alternatives, such as individual savings accounts (ISAs).

Nevertheless, the choice of investment funds and the inclusion of life assurance can make life assurance policies attractive for certain investors.

In theory, life assurance policies can be held in a stocks and shares ISA – in the past there was even a life assurance ISA – but they did not prove popular so there was very little take up.

H12A Conventional with-profit endowment savings plans

Probably the most basic savings plan is the conventional with-profit endowment:

- many policies have a ten-year term – the minimum for qualifying status;
- level premiums are paid, usually monthly or annually;

- the premiums purchase a guaranteed sum assured, payable on maturity or earlier death;
- bonuses are added to the guaranteed sum assured on the fund each year, at the office's declared rate;
- when the policy matures, or on earlier death, a final bonus is often added, which is usually based on a percentage of the total annual bonuses already allocated; and
- the eventual return is the total of the guaranteed sum assured, plus any annual bonuses and final bonus.

There is virtually no new business in this category, but many standard with-profit plans remain in force. This type of contract is now most commonly purchased second-hand (see [section H27](#)).

H12B Low-cost endowment savings plans

Under a low-cost endowment savings plan:

- basic sum assured, on which bonuses are calculated, is lower than the death sum assured; and
- amount payable on maturity is the basic sum assured plus bonuses.

Low-start, low-cost endowment savings plans have premiums that start at a low level and build up over five or ten years to the full premium which, for qualification reasons, cannot be more than double the initial premium.



New business

Like the standard with-profit endowment, virtually no new business is now written for this category.

H13 Unit-linked savings plans

Unit-linked contracts, which can include a unitised with-profit fund within the fund range, now dominate the market. They operate in the following way:

- premiums are applied to buy units in a unit-linked fund run by the life office or possibly in a unit trust run by the life office or an associated institution;
- most offices offer a choice of funds, such as equity, fixed-interest, property, international, cash and managed, whilst others have unitised with-profit funds and some have specialist funds, e.g. a specific overseas area; and
- one of the most common of these contracts is often known as a maximum investment plan (MIP). These products became popular with higher-rate and additional-rate taxpayers who had maximised their pension and ISA allowances. However, since 6 April 2013 there has been a cap on contributions into qualifying policies of £3,600, which limits their effectiveness.

H13A Charging structure

The charging structures of unit-linked policies have varied over the years:

- some policies have 'initial units' with a heavier annual management charge (AMC);
- some have an initial non-allocation period;
- some policies deduct charges for expenses and life cover from the premium before it is applied

to units;

- some policies apply the whole premium to investment and the life office cancels units each month to pay for that month's expenses and life cover;
- some offices reduce charges by giving higher unit allocations from the outset and compensate for this by introducing a surrender penalty for early encashments. A typical penalty might be 5% of unpaid premiums due up to the tenth anniversary. The aim is to discourage early surrenders and reward those investors who keep their policies for the full term.

H13B Purchase of units

When units are allocated they are bought at the current offer price. The total amount of units allocated to the policy increases each time a premium is paid. The eventual value of the policy is based on the total bid value of the units.

H13C Endowment or whole life

Unit-linked savings plans can be written as endowment or whole-life policies:

- Endowment policies usually have a ten-year premium payment term (for qualifying purposes) with a right to extend the policy if required.
- After ten years, the bid value of units can be taken as a lump sum, or premiums continued for a further ten years, or the units can be withdrawn as and when required.
- Policies can also be written as whole-life assurances. After the initial period of say ten years, these can be cashed in at any time for the bid value of the units then allocated.
- Increasing premiums are also available.
- Unit-linked savings plans are frequently issued as clusters of small policies for maximum flexibility.



Qualifying policy

Whether the contract is written as an endowment or as a whole life, it is likely to include enough life cover to ensure it is a qualifying policy. For this reason, unit-linked savings plans commonly have a guaranteed sum assured of 75% of premiums payable, over the whole term for an endowment, or up to age 75 for a whole life.

H14 Early encashment of regular premium savings policies

There are various penalties for early encashment of regular premium savings policies, and both with-profit and unit-linked policies frequently have no surrender value at all in the first year. The best return on a fixed-term savings plan is nearly always achieved by letting the contract run until maturity. Any encashment before maturity can lead to a much lower return for the reasons as follows:

- The endowment surrender values of most offices incorporate a penalty element. This reflects the costing of the premium on the basis that the contract will run its full term and that, if it is cashed in early, they will not be able to recoup the expense loadings from the unpaid premiums.
- As an alternative to surrender, it may be possible to sell a traditional with-profit policy on the open market and this will often produce a greater sum than the surrender value for the policyholder.
- A final bonus may only be payable on maturity or death and may not be applied on earlier encashment. However, under pressure from a number of sectors, many offices now include an element of final bonus in their surrender value quotes when maturity is near. Some offices include an

element of final bonus earlier, depending on the number of years held.



Consider this...

Fixed-term endowments are generally only suitable where the saver is sure that they will not want the money until the end of the term.

Segmentation

Increased flexibility can be achieved by writing the plan as a cluster of identical individual policies. This is known as segmentation. For example, a £100 per month plan might be written as twenty £5 policies or four £25 policies. The advantages of this are that:

- the saver is not committed to taking all the money at a single time;
- individual policies can be encashed as required; and
- the remaining policies can be continued independently, either with premiums being maintained or as paid-up policies.

If policies are made paid-up, no further premiums are payable and the guaranteed sum assured is reduced accordingly, but bonuses continue to be allocated at a lower rate than on fully in-force policies.

H15 Lump sum investments

Investment bonds are frequently used for lump sum investments:

- An investment bond is a single premium life assurance policy.
- Most bonds are written as whole-of-life policies, with no specific maturity date.
- Investment bonds are structured primarily as investments and provide only nominal life cover, which is typically just in excess of the value of the fund on death, i.e. 101% of the value of the units.
- They can be written on a single-life or joint-life basis and are often used as trustee investments.

When an investment is made, the premium is used to purchase units in funds of the investor's choice at the offer price. When an investor wishes to cash in a bond, or make withdrawals from it, the units are surrendered at their bid price. Therefore, the price of the units must rise above the initial bid-offer spread before any gain is made, although the unit price will vary according to the market value of the underlying investments. The bid-offer spread is usually around 5% of the offer price.

In addition to the initial bid-offer spread, the fund is subject to an AMC, which is typically 1% of the value of the units and this is allowed for in the published unit price of the units.

Some investment bonds have a single pricing system with the same price applying to both purchases and sales. This means that there is no explicit initial charge, and the manager can only extract their costs through the AMC. In this situation an exit charge is likely to be applied on surrenders within the first five years.

The main types of lump sum life assurance bonds are:

- guaranteed income bond;
- high income bond;

- guaranteed growth bond;
- unit-linked bond;
- distribution bond;
- guaranteed protected equity bond; and
- with-profit bond.



'Income' payments

The regular withdrawals taken from an investment bond are considered to be a return of capital rather than true income.

H15A Guaranteed income bond

A guaranteed income bond is a very simple contract. In return for a single premium, the bond provides a guaranteed income each year for a specified period. The income is usually payable annually in arrears and most bonds are for terms of up to five years.

On maturity, the investor's capital is returned. The combination of security and good net returns make this an attractive investment for a basic-rate taxpayer.

Life offices offer these contracts from time to time, depending on their own internal taxation position. At any one time there are usually only a few offices in this market. Most tranches are for a limited time or for a limited total amount.

The attraction of these bonds is that the income is guaranteed; however, the rate offered at any particular time varies according to market conditions.

H15B High income bond

High income bonds are based on packages of derivatives. Their characteristics are as follows:

- Most offer a high level of income, e.g. 10%, for five years, but do not guarantee return of capital.
- Return of capital will depend on the performance of one, or possibly the average of two or three stock market indices.
- Provided the index meets a pre-set performance target over the period of the bond, capital is returned in full. If the target performance is not met, the payment at maturity will be less than the original investment.

Because of the risks involved with these products the previous regulator, the FSA, issued strict guidelines on how they should be marketed.

H15C Guaranteed growth bonds

Guaranteed growth bonds are similar to guaranteed income bonds, except that they pay no income:

- the investor pays a single premium and is guaranteed a capital sum in three, four or five years' time;
- the capital sum is free of capital gains tax (CGT) and basic-rate income tax has already been deducted at source;
- while the bond is held it generates no income for the investor;

- maturity dates are typically from one to five years and sometimes for longer periods;
- at maturity, the bond can usually be encashed or possibly rolled into another bond;
- the underlying investments held by the insurance companies are usually gilts and other short- to medium-term financial investments; and
- the relatively high returns available to investors are based on the advantageous tax position of the life policies.



Availability

Other non-income-producing investments that provide a guaranteed return for investors are not widely available. Alternatives are zero coupon preference shares in investment trusts, which provide fixed but not guaranteed capital gains and are dependent on stock market performance to some extent.

The guaranteed income bonds benefit from the underlying guarantees provided by the Financial Services Compensation Scheme (FSCS).

Encashing

Each of these income and growth bonds is designed to run for a fixed term, and it is not possible to simply encash them at any time and receive the full value from the investment. Most bonds allow access to the investment capital before the maturity date, but there will be penalties that can be significant. Investors need to be made aware of the fixed-term nature of these products, and the potential costs if they are likely to need access to their capital before the end of the fixed term.

H16 Unit-linked bonds

Many higher-rate taxpayers invest in single premium unit-linked bonds either for capital gains or income. With an onshore bond any liability to basic rate income tax is covered by the tax paid within the fund, and the investor may take 5% of the original investment without an immediate liability to tax. This can be continued for 20 years or until the initial capital has been returned. The effect of this can be to give the investor a relatively high net return when compared with fully taxable investments as illustrated here:

- to receive a net return of 5% on a fully taxed investment, a 40% taxpayer would need a gross yield of 8.33%; and
- if the underlying funds are growing at a rate of more than 5%, then the capital sum payable on final encashment will also be growing.



Payments

Investors must remember that the payments are capital withdrawals, not income. If a 5% withdrawal exceeds the growth rate, capital is being drawn as well as investment income.

H16A Encashing

Unit-linked bonds are written as whole-life policies and so can be cashed in at any time or left until the policyholder's death.

The investor can take an income from the bond, which can be at regular or irregular intervals (of any amount) whenever required. The income is obtained by cashing in part of the unit holding. If the rate of income exceeds the growth rate of the units, then the bond will decline in value and may extinguish

altogether if this continues.

H16B Advantages and disadvantages of unit-linked bonds

The main advantage of unit-linked bonds is their flexibility – cash can be taken out as and when required. This is a big improvement over the guaranteed bond, where the dates of payment are fixed in advance and cannot be altered.



Consider this...

Guaranteed bonds have the advantage of security because the return is guaranteed for both capital and income. However, unit-linked bonds may provide a higher return (but also the possibility of generating losses) depending on the investment performance of the funds.

H17 Distribution bonds

Ordinary unit-linked bond funds do not separate income and capital, and the investment returns from invested income are simply reflected in the unit price. Any withdrawals taken as a form of income are achieved by cashing in units, which have no particular relationship to the actual income generated by the fund.

Distribution bonds effectively distinguish between income and capital so that the income paid reflects the income generated by the fund. This leaves the capital intact, although this could still rise or fall in value. The ABI classification requires that a distribution fund must have a maximum equity content of 60% and a yield of, at least, 110% of the FTSE All-Share yield. All income must be capable of being paid to the investor. The relatively low equity limit means that some distributing high-yield equity funds are not classed as distribution funds. The way these bonds work is as follows:

- The money is invested in a special distribution fund, which pays out the natural accrued income of the fund, i.e. dividends, interest or rental income, usually two or four times a year though some offices can pay monthly.
- Investors can take these payments as income, but there are no unit encashments and the number of units in the bond remains constant – although the payments look like income, they are actually capital.
- The unit price will fall in line with the payout on each distribution date.
- The investment managers of the fund have to bear in mind the requirement for income in the way they manage the fund's assets, which tend to be well spread with a high proportion of gilts and fixed-interest securities to lessen the risk.
- These bonds should be regarded as a medium- to long-term investment because many offices have early surrender penalties.
- The taxation of distribution bonds is the same as for ordinary unit-linked bonds, i.e. 5% cumulative allowance rules apply to the income distributions.



Reinforce

A distribution bond could be an appropriate investment for a cautious investor requiring income. The risk profile in general is fairly low, but there is still a reasonable chance of capital growth.

H18 Guaranteed/protected equity bonds

These are unit-linked bonds with some form of guarantee, linked to various stock market indices. They are fixed-term single premium life assurance policies that are usually based on a combination of an over-the-counter (OTC) call option and a fixed-term deposit.

Guaranteed equity bonds

Guaranteed equity bonds typically guarantee the return of the original cash investment on the maturity date of the bond, plus a percentage of the growth in the index to which it is linked. A few incorporate lock-ins, which guarantee returns if the growth in the chosen index reaches more than a certain set percentage at any time during the policy term.

The guarantee generally operates only on a fixed anniversary date. If the bond is surrendered before that date the normal unit value principle applies.

The guarantee is usually achieved by a fixed-term deposit or zero coupon bond, with the exposure to the growth in the stock market index being provided by some form of option (often an OTC option) purchased by the life office.

Protected equity bonds

Protected equity bonds allow investors to select a quarterly guaranteed level of protection. This is typically between 95% and 100% of the capital at the start of the quarter, although the actual level of protection varies between providers. The bond will be protected against falls in excess of this selected level of guarantee, regardless of the performance of the index to which it is linked.

The greater the level of protection, the slower the bond's value will rise if the underlying index rises.

Assessment

These investments are worthwhile for those who like the idea of an equity-linked product, but who do not want to risk losing money. It is worth keeping in mind:

- While receiving 100% capital return on a fully guaranteed fund does not appear as a loss, in real terms a loss has arisen because of inflation.
- Guaranteed equity bonds must be held for their full term to benefit from the guarantee of capital protection and are not suitable as short-term investments.
- Protected equity bonds with a 95% quarterly rolling guarantee can still produce a loss of nearly 20% over a one-year period, ignoring any initial bid-offer spread.
- The indices chosen follow the price of leading shares. They usually make no allowance for dividend income, which can be an appreciable part of normal unit-linked fund growth.
- All guarantees involve costs. In general terms, the better the guarantee the lower the ultimate return when compared with a non-guaranteed equity bond, particularly if stock market performance over the period is good.

H19 Bonds as trust investments

Bonds are often appropriate investments for trustees, if they are looking for long-term capital growth.

This is for the following reasons:

- Bonds provide a wide variety of funds to meet the different risk requirements of different types of trust.
- The policies generate no taxable income and so substantially reduce the amount of administration, and subsequent expense, for the trustees.
- The underlying life fund suffers corporation tax on income at a lower rate than the trustees would pay on accumulating income. When the trust income is below £1,000, the trustees of discretionary trusts pay income tax at the rate of 7.5% for dividend income and at the rate of 20% for all other income. When the trust income is above £1,000, they pay income tax at the rate of 38.1% for dividend income and at the rate of 45% for all other income.
- Under current law the policies can be assigned to the beneficiaries of a trust and there would usually be no income tax charge on the transfer. The policies could then be encashed by the beneficiaries and possibly suffer no additional tax, depending on their tax position at the time.
- Up to 5% of the original investment can be withdrawn by trustees each policy year and paid to beneficiaries with no immediate liability to tax for the trustees.

Liability for chargeable gains

If the trustees trigger a chargeable event then any chargeable gain is assessable to income tax. A chargeable event might be triggered by:

- withdrawing more than 5% each year from an investment bond;
- encashing a bond; or
- the death of the life assured.

Originally, if a policy was subject to a trust, the person chargeable was the individual who created the trust, although they could recover the tax from the trustees. If the creator of the trust was dead and had died in the tax year before the year of the gain, there was then no-one on whom HMRC could tax the gain. This was known as the 'dead settlor rule'.

The rule changed in the **Finance Act 1998**. The situation is now as follows:

- If the individual who created the trust is both alive and a UK resident immediately before the chargeable event, the gain is treated as part of that individual's income. They can recover any tax paid from the trustees.
- If the individual who created the trust is dead or resident outside the UK immediately before the chargeable event, and one or more of the trustees are resident in the UK, the trustees are chargeable on the gain but without the benefit of top-slicing relief. The charge for a discretionary trust is 45% for income above the trust's basic-rate band and 20% for income within the basic-rate band. On gains that exceed the basic-rate band there is, therefore, a 25% liability for a UK policy, due to the basic-rate credit. This tax cannot be reclaimed by the trust beneficiaries, even if they would not have been liable to it in their own right, because they are well below the higher-rate threshold.
- If the trustees are not resident in the UK, any UK beneficiary receiving a benefit under the trust from the gain will be taxable on that amount at their tax rates, but without top-slicing relief. No credit is given for the basic-rate credit of 20% when a gain arising to non-resident trustees is assessed on an individual beneficiary.

The rules apply to chargeable events that occur on or after 6 April 1998. They do not apply to policies effected before 17 March 1998, where the trust was also created before that date and the creator of the trust died before that date. For these cases, HMRC accepts that there is no one to tax (the dead settlor rule) as long as the policy is not varied on or after 17 March 1998 so as to increase the benefits or extend the term.

The 25% tax charge referred to above can be avoided if the beneficiaries are non-taxpayers or basic-rate taxpayers. This can be done by arranging for the trustees to retire and be replaced by foreign trustees (e.g. in the Channel Islands or Isle of Man) before the chargeable event. The beneficiaries would then be liable at their personal rates – and there would be no tax if their incomes were low enough to avoid the chargeable gain putting them in the higher-rate tax band. However, top-slicing cannot be used for this purpose.

Alternatively, the trustees could assign the policy to a beneficiary, free of the trust, before a chargeable event occurred. The policy could then be cashed-in by the beneficiary (now the full owner) and tax would be chargeable on them, rather than on the settlor or the trustees. If the beneficiary was well below the higher-rate tax threshold, this could eliminate any tax liability on a UK policy.

The beneficiary would also benefit from full top-slicing relief.

H20 Offshore bonds

Offshore bonds are generally issued by subsidiaries of well-known UK life offices in countries such as Luxembourg, the Channel Islands or the Isle of Man. Although onshore and offshore bonds are structured in similar ways, the tax treatment of the two types of bond is different.

The perceived advantage of offshore bonds is that the country concerned imposes little or no tax on the income and gains of the underlying life fund, thus allowing what is often called a gross roll-up that is valuable, particularly to a higher-rate taxpayer. This contrasts with an onshore bond, where the fund suffers tax at up to 20% on income and on gains (although indexation allowance still applies). However, the effect of gross roll-up can be reduced by the fact that charges are often higher for offshore bonds than for their onshore competitors, and some investment income may be received after the deduction of non-reclaimable withholding tax.



Taxation of UK policyholders

UK policyholders with offshore policies are liable to income tax at their highest rates on the whole of their gain, with time apportionment relief for any periods spent outside the UK during the term of the policy.

Encashment

When an offshore bond pays out and a gain arises, there is a chargeable event for income tax purposes, because it is a non-qualifying policy.

The chargeable gain is calculated by multiplying the total gain by the following fraction. As shown:

$$\frac{\text{number of days policyholder was resident in the UK}}{\text{number of days the policy has run}}$$

Therefore:

- the whole gain is chargeable if the policyholder was resident in the UK for the policy's whole term;
- if they were resident for, e.g. five out of ten years a policy was held, only half the gain is chargeable; and
- if the policyholder was resident outside the UK the whole time, the chargeable gain is zero.

There is no time apportionment if the policy has ever been held by a non-resident trustee – in such cases the whole gain is chargeable.

You should note that time apportionment relief has also been applicable to onshore bonds since April 2013.

Taxation of a gain on an offshore bond

When a UK policyholder encashes an offshore bond, two separate calculations are carried out:

- **First, the basic-rate tax calculation is carried out**

For a basic- or higher-rate taxpayer, the whole gain is charged to tax at the basic rate, currently 20%. If the policyholder's other income is not sufficient to reach the basic-rate band, any part of the gain that falls within the personal allowance would not be subject to tax. As chargeable events are subject to the savings rate of income tax, the starting rate of 0% will apply. Where the taxpayer's non-savings taxable income is less than the starting rate limit for savings (£5,000 in 2017/18) the income is not taxed. The PSA can also be used to offset the tax due on an offshore bond.

- **Second, the higher-rate or additional-rate tax calculation is carried out**

The gain is top-sliced and added to the policyholder's other income. When the tax on the slice has been calculated (using the 20% and 25% rates in the normal way) it is multiplied by the number of relevant years to determine the total higher-rate tax payable on the gain.

If the policyholder was resident in the UK for the policy's whole term, the whole gain is chargeable. However, if they had at some time been non-UK resident, the gain is reduced by a fraction equal to the period of non-residence divided by the duration of the policy.

The number of years used for top-slicing is also reduced by the number of complete years for which the policyholder was not resident in the UK.

A chargeable gain on an offshore policy is always top-sliced back to the start date of the policy, even for part withdrawals. This is in contrast to a UK bond where part withdrawals are always top-sliced by reference to the number of years since the last chargeable event, each chargeable event effectively rebasing the date of the policy for top-slicing purposes.

H21 Offshore and onshore bonds compared

It might seem that an offshore bond is always preferable. This is not necessarily so for a number of reasons:

- Gains made by an onshore fund still benefit from indexation relief, with the net gain being taxed at 20% or 25% under the chargeable gains rules on encashment by higher-rate and additional-rate

taxpayers. With an offshore bond, gains are taxable at 40% (or 45%) on encashment with no indexation allowance.

- Some investment income received by an offshore fund may be received after deduction of non-reclaimable withholding tax, thus reducing the effect of the gross roll-up. In addition, there would be no credit for this in the chargeable gain, leading to possible double taxation.
- Charges on offshore bonds are generally higher than onshore ones, which will reduce the final net return received by an investor.
- In an onshore fund, management expenses may be deductible from the fund's income for tax purposes. An offshore fund has no tax from which to deduct management expenses, thus reducing the effect of the gross roll-up.
- On an onshore bond, for a higher-rate taxpayer 20% tax is charged on the net return of the fund, whereas on an offshore fund the 40% is on the gross return. The difference this makes is shown by the following example, which contrasts an onshore gain from income of £100,000 with an offshore one of the same amount.



Example 6.12

Onshore	£	Offshore	£
Gain in fund	100,000	Gain in fund	100,000
Less tax at say 20% in fund	20,000	Investors tax at 40%	40,000
Net gain	80,000	Net gain	60,000
Investors tax at 20%	16,000		
Net gain	64,000		

In this case, the net gain is higher on the onshore bond.

One advantage of an offshore bond is that income can roll-up gross. In theory, over the long term, the compounding effect could make a difference to the eventual overall return, despite the higher tax on final encashment. However, this advantage is generally only gained over the long-term or where the fund is invested in interest-bearing assets.

H22 Offshore bonds and offshore funds compared

The underlying investments of offshore single premium bonds and offshore funds are similar. In fact, many offshore single premium bonds invest directly into offshore funds. There are significant differences for UK resident investors:

- within a bond, switches between funds do not give rise to a personal tax liability, which is not the case for offshore funds, even if they have an umbrella structure;
- depending on their category, gains on offshore funds may be subject to either income tax or CGT, whereas gains made on offshore bonds are solely governed by the generally less favourable income

tax regime;

- charges on offshore bonds tend to be higher than offshore funds, particularly if third-party investment management is involved;
- it is generally easier to place and maintain offshore bonds in trust than offshore funds; and
- the '5% rule' allows tax-deferred withdrawals to be taken from offshore bonds, but not offshore funds.

H23 Personal portfolio bonds

On a normal unit-linked bond, investors pay cash to the life office that is then invested in the selected funds. Alternatively, they may have used a share exchange scheme to sell shares and purchase a bond with the proceeds.

Some investors may have a portfolio of shares that they would like to keep and manage themselves, or would prefer the stocks to be managed by their existing stockbroker, rather than the life office. A few UK offices allowed this to be done by creating a personal bond, which in reality is the investor's own portfolio wrapped up within a bond. However, the Finance Act 1998 imposed tax penalties on deemed gains and so currently only offshore offices provide this facility to non-residents. A few things to remember:

- The deemed gain is 15% of the total premiums paid at the end of a policy year, plus the total deemed gains from previous years (minus any chargeable withdrawals). This in effect taxes the policyholder as if the investment was yielding 15%, regardless of any actual growth.
- In addition, the deemed gain is on top of the normal tax charge that would arise on a part surrender.
- The usual rules for chargeable gains apply to the deemed gain, except that there is no top-slicing relief.
- The deemed gain can be deducted from a final termination gain. For an onshore policy, there is a credit for the basic-rate tax paid by the life fund.



HMRC intent

The intent was to extinguish these bonds, which is what has happened, at least as far as UK residents are concerned.

H24 Friendly society policies

Friendly societies started as mutual self-help associations in the eighteenth and nineteenth centuries, and were assisted in this aim by complete exemption from taxation. This has enabled them to offer tax-efficient savings plans, although legislation restricts their business by imposing limits on the size of contracts they can offer. Only a few societies, mostly recently established, actively market tax-exempt savings plans.

Table 6.8: Friendly society policies

Table 6.8: Friendly society policies	
Tax treatment	<ul style="list-style-type: none">• The friendly society does not have to pay any income tax or CGT on the investment returns achieved on its funds. The return to the saver is potentially greater than on a policy issued by an ordinary life office, where the underlying funds are taxed.

Investment choice	<ul style="list-style-type: none"> • In the past, friendly societies were legally confined to investing at least half their funds in such investments as cash, gilts and other safe securities. Now they can invest where they like. • For investors, the main choice of funds is generally cash deposits, managed or mixed funds and with-profit.
Investment limits	<ul style="list-style-type: none"> • The limit on annual premiums for tax-exempt business is £270 per annum. If premiums are payable monthly or quarterly, the maximum permitted premium is £25 per month (or £300 per year). • The limit applies to the total of all friendly society policies owned by an individual. Thus, if someone has one £270 annual policy, they cannot have any more tax-exempt policies with that or any other society. Existing policies can be increased up to the £270 limit without losing the tax-free or the qualifying status. • A friendly society can also write ordinary taxable business without limit. • Children under 18 can effect tax-exempt friendly society policies – the so-called baby bonds. Parents can have their own friendly society policies for £270, as well as one for each of their children.
Investor protection	<ul style="list-style-type: none"> • Friendly societies are covered by the FSCS and supervised by the FCA.
Regular savings plans	<ul style="list-style-type: none"> • Friendly societies currently market a variety of ten-year savings plans. Most are unit-linked plans, some plans are linked to building society deposits and some societies offer with-profit plans.
Lump sum investments	<ul style="list-style-type: none"> • A number of friendly societies also offer lump sum investments. • The lump sum buys a capital protected annuity, which feeds each annual premium under the friendly society policy. • If the saver dies during the policy term, because the annuity is capital protected, the life office returns the difference between the single premium and the total gross annuity payments already made, and this is paid in addition to the sum assured under the friendly society policy. • Some societies use guaranteed bonds or unit-linked bonds as a funding vehicle. If the bond has any value remaining in it after the ten-year funding period it can be encashed or left to grow.

Many advisers recommend that savers invest the maximum annual premium into a friendly society, ten-year savings plan because:

- funds grow tax-free;
- fairly high degree of security, although this could change; and
- return is tax-free if taken after at least seven and a half years.

The plans have the minimum amount of life cover to remain qualifying, i.e. 75% of total premiums. With unit-linked plans, the life cover is usually paid for by unit cancellation. Early surrender values depend on unit prices.



Charges

The tax advantages of many friendly society policies are significantly reduced by the level of charges made on them.

Friendly societies can incorporate themselves and undertake other types of business through subsidiaries.

This has enabled them to increase their range of services to include unit trusts, OEICs, ISAs and mortgages.

H25 Taxation of life assurance policies

One of the main reasons for choosing to invest through the medium of a life assurance policy is its tax treatment:

- The tax treatment of a life assurance policy benefit depends on whether or not it is a qualifying policy and how the benefits are drawn.
- The tax treatment of the funds held in the policy is the same – regardless of whether it is qualifying or not.

H25A Taxation of life assurance funds

The taxation of life assurance funds is as follows:

- Dividends from UK companies are received as franked income and the life fund has no additional tax liability on these dividends.
- Dividends from foreign companies, interest from gilts and fixed-interest securities, and interest from cash are taxed at 20%.
- Non-savings income, such as rent, is taxed at 20%.
- Gains on gilts and corporate bonds are exempt from CGT.
- Capital gains on other assets such as shares and property are taxed at 20%. For instance:
 - indexation allowance is available.

The expenses of an insurance company can be offset against its unfranked investment income. An implication of this is that life offices whose expenses are greater than their unfranked investment income, generally pay little or no tax on their investments and can afford to provide higher returns, e.g. on income and growth bonds. Such companies are generally fast growing and/or small and/or have a high proportion of UK equity income.

It is, however, the type of policy that determines the policyholder's tax position.

H25B Qualifying policies

Most regular premium life assurance policies taken out for investment purposes (as opposed to protection) are likely to be endowments. An endowment policy must pass various tests to qualify:

- policy term must be at least ten years;
- premiums must be payable annually or more frequently for at least ten years (or until death or disability);
- minimum level of life assurance cover is 75% of the total premiums payable;
- premiums payable in any one year must not be more than double those payable in any other year; and
- no premium is to be more than one eighth of the total premiums payable over the term of the policy.

Since 6 April 2013, the annual limit for premiums payable under qualifying policies (that are not exempt)

is £3,600 in a 12-month period. Transitional rules applied to policies issued between 21 March 2012 and 5 April 2013. Policies issued in this period are restricted so that relief is only attributable to premiums paid, or treated as paid, in the transitional period, and for premiums paid up to the £3,600 annual limit thereafter.

Early encashment

A surrender within the first ten years, or three-quarters of the term if sooner, can be subject to income tax because it is a chargeable event:

- tax is payable only if the surrender value exceeds the total gross premiums (the chargeable gain) and then only at the saver's top rate minus basic rate; and
- if the saver is only a basic-rate taxpayer, after addition of the top-sliced chargeable gain, there will be no tax liability.

A surrender might also result in the loss of the Married Couple's Allowance (MCA), Child Tax Credit and Child Benefit. Also, premiums paid to qualifying policies that are in excess of the premium cap of £3,600 will be subject to the chargeable event rules.

Tax-free lump sum

The proceeds of a qualifying policy on maturity are completely free of any further annual taxes:

- there is no personal income tax or CGT if the policy is in the hands of the person who was the original life assured, or it has never been acquired by another person for money or money's worth; and
- if a policy is surrendered after ten years, it will also be free of further taxes.

Therefore, a 20-year endowment or a unit-linked whole-life policy can be cashed in with no tax liability at any time after ten years.

The qualifying rules also provide that proceeds are free of further taxes on surrender after three-quarters of the policy term if sooner. Therefore, a ten-year endowment can be surrendered after seven-and-a-half years without any further income tax liability.



Underlying life fund

It should be remembered that the underlying life fund has already suffered up to 20% income tax and CGT.

H25C Taxation of non-qualifying policies

All gains on non-qualifying policies are taxable. However, tax is only payable if:

- a chargeable event occurs;
- a chargeable gain arises; and/or
- when the gain added to the taxpayer's total yearly income puts it in the higher- or additional-rate tax bracket.

These factors will now be dealt with in turn.

Chargeable events for non-qualifying policies

The chargeable events for non-qualifying policies are:

- death of the life assured;
- maturity;
- surrender or final encashment of a policy;
- certain part surrenders; and
- assignment for money or money's worth.

Whenever a chargeable event occurs and a gain arises, the life office has to issue a certificate to the policyholder. They also issue a copy to HMRC if the amount of the gain exceeds half of the basic-rate income tax band. Policyholders are required to report all chargeable gains on their tax returns.

It is important to note that assignments by way of a gift, where the policy has not previously changed hands for any consideration, and assignments by trustees to beneficiaries are not chargeable events.

Calculation of a chargeable gain

When a chargeable event occurs, a calculation must be done to see whether a gain has arisen.

Partial withdrawals

For partial withdrawals, the chargeable gain is determined at the end of each policy year when all withdrawals for the year are added together. The chargeable event certificate is issued to the investor on the policy anniversary date, and the assessment of income tax is made in the tax year in which the policy anniversary date falls.

Up to 5% of the original investment may be withdrawn each policy year, without attracting a tax liability at the time, also. For example:

- The potential liability is deferred until final encashment or death.
- If the allowance is not used in any one year, it may be carried forward on a cumulative basis for future years.
- The allowance is treated as a return of the investor's capital, and applies until the total of all withdrawals covered by the cumulative 5% allowance equals the original investment.

If any withdrawals have been made during the policy year, the amount withdrawn has to be compared with the cumulative allowance (5% for the current year plus any unused allowance carried forward from previous years) to determine if there has been a chargeable event and a chargeable gain.

The chargeable gain is the amount by which the withdrawals exceed the cumulative allowance that is available.

Provided the total amount withdrawn does not exceed the cumulative allowance, there is no chargeable gain, and no chargeable event in that year: the amount is, therefore, carried forward.

If the amount withdrawn, plus the previous withdrawals that have been carried forward, exceeds the cumulative allowance, a chargeable event has occurred. The excess over the cumulative 5% allowance will be treated as a chargeable gain regardless of the actual performance of the bond.

Maturity, surrender or assignment for money or money's worth

The chargeable gain on final encashment or assignment for money is assessed in the tax year in which it occurs, and takes into account all previous chargeable events.

The chargeable gain is calculated by adding the final policy proceeds to the total of all previous withdrawals, and then deducting the original value of the investment (including increments, if any) and any previous chargeable excesses.

If the final gain on the bond is less than previous chargeable excesses, then the difference can be used to offset any higher-rate income tax liability in that tax year.

Death

Where the proceeds of a bond become payable on death, the gain is calculated as if the bond had been cashed on the date of death.

Any additional amount of life cover is excluded from the chargeable gain.



Example 6.13

The following is an example of a calculation involving a single premium bond of £10,000, which is held for five years.

- **Year one**
Part surrender of £500.
No chargeable event because it is not over 5% of the single premium.
- **Year two**
Part surrender of £1,000.
Chargeable event, because the accumulated withdrawals (£500 + £1,000) exceed the total of the annual 5% allowances for two policy years.
- **Year five**
The bond is cashed for £14,000.
Final encashment of a non-qualifying policy is a chargeable event.

	£
Chargeable gain =	
maturity value	14,000
plus part surrender in year 1	500
plus part surrender in year 2	<u>1,000</u>
Total	15,500
Less initial investment	<u>10,000</u>
	5,500
Less previous chargeable gain (excess over 5% allowance)	<u>500</u>
Chargeable gain on maturity	5,000

Top-slicing

Since the chargeable gain identified at a chargeable event may have built up over a number of years, it would be unfair to treat it all as having been earned in the year of receipt.

Therefore, a method of relief known as top-slicing is allowed, which divides the excess or gain by the number of years over which it built up to give an average yearly gain.

- **Partial withdrawals:**

For partial withdrawals the gain or excess is divided by the number of years since the start of the bond (in the case of the first chargeable event) or since the last chargeable event (for subsequent excesses).

As the calculations can only be carried out at the end of the policy year (by which time all withdrawals for the year will be known) the top-slicing calculation for part withdrawals includes the current year.

- **Final encashment or death:**

The chargeable gain on final encashment will be assessed in the year in which it occurs and will take into account all previous chargeable events.

The top-slicing calculation for final encashment or death uses the number of complete policy years from the start of the bond until final encashment.



Chargeable gains

Making partial withdrawals from a bond does not alter the total chargeable gains that may arise, however, it can alter when any gains will be assessed to tax. The advantage of deferring as much of the chargeable gain as possible is partly because the investor could benefit from the investment return on the deferred tax liability, and partly because the investor's marginal rate of income tax may be lower when any liability arises, e.g. after retirement.

Taxation of a gain

Tax is calculated after the chargeable event has occurred and a chargeable gain has arisen. Since the investment funds have already borne tax, there is no personal liability to either basic-rate income tax or CGT. Tax is calculated as follows:

- The top-slice of the gain is calculated and added to the individual's total income for that tax year. The chargeable gain does not have to be grossed up, thereby further reducing the likelihood of a personal liability to tax.
- Provided taxable income, including the top-slice, is not more than the basic-rate threshold in the year the bond is cashed, no personal tax would be payable. Non-taxpayers cannot reclaim any tax.
- If taxable income, including the top-slice, is more than the basic-rate tax threshold, then tax is charged at the difference between the higher-rate and the basic-rate on the amount falling in the higher-rate band (currently 20%).
- If taxable income, including the top-slice, is more than the additional-rate tax threshold, then tax is charged at the difference between the additional rate and the basic rate on the amount falling in the additional-rate band (currently 25%).
- The total tax on the gain can then be calculated by multiplying the tax on the slice by the number of years used to calculate the slice.
- By cashing bonds when other income is low (e.g. after retirement), it could be possible to reduce or even completely eliminate the personal tax liability. Furthermore, if the bond is issued as a series of segmented policies, full policies can be cashed in separate tax years, which should further reduce the

chance of a tax liability.

- A gain from an onshore bond can be included in the personal savings allowance (PSA).

Many investors hold on to these bonds until death. The tax liability may then be reduced, because total income in the year of death will be less than usual. This is especially true if the investor dies early in the tax year.



Reinforce

The extreme case would be an investor who died on 6 April, whose other income in that tax year would probably be negligible, thus avoiding any tax at all on the bond proceeds.

Joint ownership

If a bond is jointly owned, the gain is split in the same proportion as the ownership, regardless of the person to whom the money is actually paid. Each owner is therefore taxable on their share of the gain.

If the joint owners are married to each other, or in a civil partnership, HMRC considers that each spouse should be taxed on half of the gain.

Independent taxation

There are a number of ways in which independent taxation can be used to reduce the tax liability on gains on bonds:

- if an investor is a higher-rate or additional-rate taxpayer but the spouse is not, then the bond could be assigned to the spouse before a surrender is made;
- the assignment is not a chargeable event and is free of CGT and inheritance tax (IHT), assuming the spouse is UK domiciled, and puts the money in the hands of someone who will not be taxed on it.

A tax saving of 20% or 25% of the gain can therefore be made.

Married Couple's Allowance

The Married Couple's Allowance can be claimed if the couple are married or in a civil partnership, are living together, and if at least one of the parties was born before 6 April 1935.



Treatment of the gain on final encashment

In addition, the total gain on final encashment will be treated as income for Married Couple's Allowance purposes. The whole of the chargeable gain is used, as top-slicing does not apply in MCA calculations. The effect of this will be to restrict the MCA, but only to its floor (£3,260 in the 2017/18 tax year).

Child Benefit and Child Tax Credit

If someone has adjusted net income of more than £50,000 and claims Child Benefit, a tax charge will be incurred.

Child Tax Credit is not a tax allowance but a social security benefit consisting of a number of elements. It is paid directly to the main carer but is progressively reduced according to the joint income of the claimants.

When determining 'adjusted net income' for Child Benefit and Child Tax Credit purposes, a chargeable

gain has to be included in the taxpayer's income without top-slicing, as follows:

- any withdrawals in excess of the 5% cumulative allowance will be treated as income; and
- the total gain on final encashment will also be treated as income.



Impact of a chargeable gain on Child Benefit and Child Tax Credit eligibility

A chargeable gain may therefore reduce or eliminate a taxpayer's eligibility for these benefits.

H26 Segmentation

Maximum flexibility can be achieved if a bond is divided into a number of segments or clusters. The advantage of segmentation arises from the different tax regimes that apply to full and part surrenders, and may reduce the actual amount of tax that is payable.

Segmentation means taking out a cluster of identical small bonds rather than one large bond:

- It provides an alternative to repeated part surrenders, since complete segments may be surrendered.
- This maximises the benefit of top-slicing by ensuring that the period over which gains are spread dates back to the commencement of the bond.
- In comparison, when a part surrender is made, the period over which the gain in excess of the cumulative 5% allowance is spread dates back only to the previous chargeable event:
 - In particular, if withdrawals are made for more than 20 years, after all 5% cumulative allowances have been exhausted, top-slicing on each additional part surrender would only be based on the period since the previous chargeable event. A segmented bond, on the other hand, would benefit from top-slicing for the full number of years each segment had been held from its commencement.
- Although the segmentation of a bond does not alter the total gains that arise, the advantage of having a choice between making part surrenders and surrendering whole segments is that they produce different chargeable gains and it is therefore possible to select the method that provides the more favourable result for the investor:
 - In particular, large part surrenders can produce artificially high gains as investment performance is ignored, whereas a full surrender would usually produce a precise and lower figure related to the actual gain on the bond.
- There is no disadvantage in segmentation, since part surrenders could be made across all of the segments of a policy as an alternative to surrendering whole segments.
- It is also possible for some policies to be totally surrendered, while others are part surrendered, in which case the dates of the chargeable events would be different and could possibly fall into different tax years:
 - this is because full surrenders are assessed in the tax year in which they occur, while part surrenders are assessed in the tax year in which the policy anniversary falls.

The example in [appendix 6.3](#) at the end of the chapter contrasts the treatment of a single £10,000 bond and a cluster of twenty £500 segments, and assumes a unit growth rate of 5%. In the example, the chargeable gain on final encashment is higher, but the total gains are the same for each method, i.e. £3,592. However, segmentation is preferable for the following reasons:

- Most investors prefer gains to occur later rather than sooner, e.g. final encashment after retirement when the tax rate may be lower. Segmentation will always effectively defer gains.
- There is a cash-flow effect of deferring gains, and therefore tax, for as long as possible – tax deferred is tax saved.
- Although total gains are the same in each case, the greater top-slicing relief given by segmentation can lead to less tax being paid if the investor is on the border of the higher-rate tax. This will be especially true if frequent withdrawals are taken.
- If the bond is held until death, deferring much of the gain is beneficial because the investor's tax rate in the year of death is usually lower, especially on death early in the tax year. Also, any income tax liability reduces the estate for IHT purposes.



Topping up

Most life offices allow unit-linked bonds to be topped up, so that an investor can add an additional premium to an existing bond at any time instead of taking out a new policy. This makes no difference to the investment return, but can be beneficial in relation to how the gain is taxed.

Top-slicing relief is related to the full term of the policy, from the date of the commencement of the bond, even if some of the gain is produced by a premium paid part-way through the term.

H27 Second-hand policies

There is much interest in the selling and buying of existing life policies, often called the second-hand or traded endowment policy (TEP) market. This market is attractive for the:

- original policyholder who needs cash, because the selling price of the policy may be better than the surrender value offered by the life office, sometimes by a substantial margin; and
- buyer, because although future premiums will have to be paid, the yield on maturity may be good and there is always a chance of an early profit if the life assured dies.

The process is as follows:

- the seller has to execute a deed of assignment in favour of the buyer and hand the policy over to them;
- the buyer should serve notice on the life office to protect their interest and to prevent the life office paying the original owner by mistake;
- the buyer will be responsible for premiums falling due after the sale and will have to make arrangements to pay them;
- it is advisable for the buyer to keep in touch with the life assured so as to be aware of any death claim; and
- some market makers are willing to buyback policies sold by them. This increases the liquidity of the investment and is, in effect, a tertiary market.

Participating in this market, whether as market maker, agent or auctioneer, is classified as investment business requiring authorisation by the FCA.

The policies traded are mostly with-profit endowments and some with-profit and guaranteed bonds. Each firm has its business criteria, usually based on acceptable life offices, minimum surrender values, and

years of the policy left to run.



Policies most popular with buyers

Older with-profit policies with a few years to run to maturity and from established offices are the most popular. Each firm also has its own scale of charges for buyers and sellers. The market maker or agent should check that there are no assignments registered with the life office and that premiums are paid to date.

H27A FCA requirements

FCA rules provide that:

- when an independent adviser is asked to arrange the surrender of a with-profit endowment policy the adviser should tell the client, where appropriate, that it may be possible to obtain a higher cash value through the second-hand policy market;
- similarly, life offices are now required to inform policyholders considering surrender about the second-hand market if the policy is marketable;
- an IFA advising buyers must give the buyer a quotation of the life office's surrender value;
- the IFA must also explain the arrangements for assignment, including notice to the life office and for keeping the deed and copy notice with the policy;
- the IFA should explain the claims procedures and the arrangements for checking whether the life assured has died; and
- the IFA must also ensure the buyer understands the tax position.

H27B Taxation on the seller

The tax position is currently as follows:

- if a qualifying policy is sold after at least ten years, or three-quarters of the term if sooner, the sale is not a chargeable event and there is no income tax;
- if a qualifying policy is sold within the ten-year period, or three-quarter term, the sale is a chargeable event and if a non-qualifying policy is sold, the sale is always a chargeable event. For example:
 - If the sale is a chargeable event, the seller will make a chargeable gain where the sale price exceeds the total premiums paid.
 - If the seller is a higher-rate or additional-rate taxpayer, the gain is subject to higher-rate or additional-rate income tax, less basic-rate tax. The gain is subject to top-slicing relief.
- There will be no CGT liability on the sellers, provided they are the original beneficial owners.

H27C Taxation on the buyer

There are two principal forms of taxation on the buyer, as described below:

- income tax; and
- CGT.

Income tax

- If the buyer holds a qualifying policy to maturity, or to a death claim, there is no chargeable event

and thus no income tax liability.

- If the buyer holds a non-qualifying policy to maturity, or death claim, this is a chargeable event.
 - There will be a chargeable gain if the maturity value (or surrender value immediately before death on a death claim) exceeds the total premiums paid by the buyer and the seller; and
 - The purchase price paid by the buyer does not enter into the calculation. If a gain arises, buyers will pay income tax at their highest rate less the basic rate, subject to top-slicing relief.

Capital gains tax (CGT)

There may also be a CGT liability because the claim is a disposal made by someone who is not the original beneficial owner and who acquired the policy for consideration. It could also be because the disposal is of a policy, received as a gift, which has at some stage been bought second-hand.

The CGT situation takes no account of whether the policy is qualifying or not, although the taxable capital gain is reduced by any amount which is subject to income tax, i.e. a chargeable gain. Therefore, it is unlikely that the same policy will be subject to income tax and CGT.

For CGT purposes, the disposal proceeds are the maturity value or death claim value as appropriate.

To calculate the gain, the buyer can then deduct the purchase price and their expenses plus all the premiums that they have paid.



CGT on the gain

If the gain exceeds the annual CGT exempt amount, taking into account any other gains that year, the excess is subject to CGT at 10% or 20% depending on other income for the year.

H28 Evaluation of life assurance as an investment

Many advisers recommend UK life assurance policies to clients for their qualities as investments rather than for their potential for providing insurance cover.

H28A Single premium bonds

Advantages

The main advantages of investment bonds are broadly as follows:

- The investor can switch from one fund to another without a personal CGT charge arising. Therefore, bonds are potentially attractive for investors who want to switch frequently between funds and who would otherwise be subject to CGT at either 10% or 20%. The funds underlying the investment bonds are generally those managed by the insurance company itself, but an increasing number of insurance companies offer links to funds operated by other investment groups.
- For higher-rate taxpayers, the rate of tax that they may pay at maturity might represent a lower charge than the higher-tax rate they might be expected to pay on income or capital gains. If they expect to pay tax at a lower rate at some point in the future, e.g. after retirement, the use of an investment bond could be worthwhile, especially if there is sufficient time to build up enough income and gains at the lower rate within the fund.
- Up to 5% a year of the original amount invested can be withdrawn annually without an immediate tax

charge.

Disadvantages

The investment and tax features of investment bonds are balanced by certain drawbacks and limitations:

- UK investment bonds are subject to tax on the underlying funds and this tax cannot be reclaimed by non-taxpayers. They are therefore not suitable for non-taxpaying investors.
- Very few investors are subject to CGT, because of the annual exempt amount. For most clients, investing in UK life assurance policies will involve paying, within the fund, CGT that would not otherwise be incurred.
- Investors whose tax rates are likely to rise in the future should be careful about using investment bonds. They are effectively postponing their tax liability from a period when they are paying tax at a lower rate to a period when they may be paying tax at a higher rate.

Married Couple's Allowance (MCA) and Child Benefit

Single premium investment bonds may be both useful and potentially inefficient for investors, who find themselves with a total income over the level that results in the loss of some of the MCA or Child Benefit:

- The advantage is that the 5% withdrawals do not count towards total income. So 'income' can be taken from these investments in the form of withdrawals – without counting as income that is subject to tax in the year it is drawn.
- The potential drawback is that any chargeable amount counts in full towards total income, with no allowance being made for any top-slicing relief.

H28B Regular premium policies

Regular premium policies are taken out largely for investment or savings purposes. The life assurance elements may be of secondary importance or possibly wholly irrelevant.

Advantages

The main advantage of investing through a regular premium policy is likely to be that it is a qualifying policy and is therefore free of personal tax on maturity or early encashment under the rules. (As long as the £3,600 contribution limit is not exceeded for policies issued after the 6 April 2013).

Other things to consider are that:

- underlying investments are subject to the insurance company's tax rates, so the investment is likely to be unattractive for a non-taxpayer and possibly no longer neutral for a basic-rate taxpayer with respect to income tax following the introduction of the PSA;
- as tax is paid on capital gains, there is a loss of tax efficiency for a person who does not expect to pay CGT; and
- higher-rate taxpayers however, should benefit, especially if they pay CGT regularly on investment gains.

Possible disadvantages

Qualifying policies have to fulfil several relatively inflexible rules. These mean that they have to be

maintained for long periods, generally at least ten years, and it is difficult to vary the level of regular premiums.



Consider this...

Also, a minimum amount of life cover is required, which could represent an attractive benefit or an irrelevant expense, depending on the investor's circumstances.

H28C Offshore bonds

Offshore investment bonds are taxed in much the same way as UK bonds. However, there are several differences that may make the tax position of the underlying funds more attractive for some investors. These include the following:

- The underlying funds are free of UK tax on capital gains. Offshore bonds are therefore attractive for those who wish to have actively managed portfolios of investments, especially where there is considerable switching between different funds and types of assets.
- The scope for postponing the incidence of CGT is therefore potentially greater than with ordinary UK-authorized unit trusts, where switches between unit trusts may trigger a CGT charge.
- However, the ultimate tax charge on the gain may be greater. The capital gains are treated as income in the year of encashment and so there is no annual CGT exempt amount to use.
- There is no UK tax on investment income, but the dividends may be subject to withholding tax from their countries of origin. For instance:
 - The income tax position of offshore bonds thus provides little or no tax advantage over UK bonds for equity investment, but there are some tax advantages for income derived from deposits and fixed-interest investments held within the offshore bond funds.
 - Where the investment bond is linked to a private portfolio of shares for one investor (a personal portfolio bond), HMRC will impose the tax treatment detailed in [section H23](#).
- The proceeds of the plan are subject to both basic rate tax and the higher rates of tax. This could mean that there would be an element of double taxation on the income of equity investments that have already suffered withholding tax.
- There are often higher set-up and management charges for offshore bonds than for the equivalent UK investments.



Usefulness of offshore and UK bonds

Offshore bonds may therefore be useful where the underlying investment is either deposit or fixed-interest income or low- or nil-yielding equities that will produce capital gains.

Both UK and offshore bonds are more attractive if the investor's tax rate on encashment is lower than their tax rate during the lifetime of the bond. Where the investor can arrange to be a non-UK taxpayer at the time the bond is encashed, the long-term tax saving from an offshore bond is potentially greater.

H28D Life assurance investments generally

The adviser must be able to justify the use of investment bonds when they are used in preference to other vehicles. Tax is likely to be an important consideration and is the main reason why investment bonds are recommended.

Unless there are very good investment reasons for using a bond rather than any other type of vehicle, it is

usually preferable to invest first in tax-free investments such as ISAs, then shares, unit trusts, open-ended investment companies (OEICs) or investment trusts, where the investor has the opportunity to use their annual CGT exempt amount and pay a lower rate of CGT. Investors should also ensure that they use their dividend allowance before they decide to invest in onshore bonds.

Life assurance products enable investors to set their own level of ‘income’ withdrawals, which may be more or less than the true level of income being generated by the underlying fund. Currently, few unit trust and OEIC providers offer such a service.

I Exchange traded products

I1 Exchange traded funds

Exchange traded funds (ETFs) are index-tracking funds that are listed and traded on major stock markets around the world in the same way as the shares of publicly quoted companies.

They are similar to an index-tracking pooled fund, as they reflect the diversification and performance of a chosen index, but they are traded like a single share through stockbrokers and their prices are updated throughout the day.

The first ETF tracked the FTSE 100, but the range rapidly expanded to cover equity, fixed interest and property indices in the UK and around the world, providing investors with ways of achieving exposure to entire asset classes, geographical regions, markets and sections of a market.

ETF transactions are subject to broker fees in the same way as share transactions, but there is no stamp duty to pay on purchases. They have very competitive cost structures compared with other index-tracking investments, with typical management fees of less than 0.5%.

Like other index-tracking funds, ETFs are designed to match the return on the index they track, usually by fully replicating that index by buying exactly the same investments as those in the index and rebalancing whenever the index is rebalanced.

Some ETFs use swaps, a type of OTC derivative, to replicate the returns and so the investor is exposed to the risk that the counterparty may fail to meet their obligations. This is known as synthetic replication.

Tracking an index by investing in just a subset of the index (rather than full replication) is known as sampling or optimisation.

As they are subject to management and trading costs they tend to experience a degree of tracking error (the difference between the fund’s return and the index return), although typically this will be quite small.



Performance of an ETF

The performance of an ETF reflects the total returns of a specified market index, including dividend payments, less the management charges applied by the issuer. The dividends on each index are accumulated and paid out at regular intervals, usually quarterly.

An investor will be subject to income tax on dividend payments and CGT on any gains arising on disposal

in the same way as equities. The majority of ETFs are domiciled in offshore fund centres and so the tax treatment will depend upon where the fund is located and whether it has reporting status. Many Dublin based ETFs directed at the UK market and which are quoted on the London Stock Exchange have reporting status, but not all and reference needs to be made to the fund's prospectus to ascertain its tax treatment.

ETFs are eligible for inclusion in ISAs.

I2 Exchange traded commodities (ETCs)

An exchange traded commodity (ETC) works on the same principle as an ETF, tracking the performance of an underlying commodity or basket of commodities, such as metals, natural energy resources, agricultural produce or livestock. ETCs may either try to directly track the performance of a given commodity, or, where there may be complications in tracking the value of the actual physical commodity, the ETC may track an index that is designed to measure the value of that commodity.

I3 Exchange traded notes (ETNs)

Exchange traded notes (ETNs) share many of the characteristics of ETFs. They are traded on a stock exchange throughout the day, their performance tracks the movement of an index and they give access to specialist market niches, such as commodities and currencies. An ETN is, however, a type of bond issued by a bank. In the same way as other types of debt, ETNs have a maturity date, but they do not pay any interest. Instead the returns are linked to the performance of a market index, less management fees.



Difference between ETNs and ETFs

ETNs differ from ETFs as there is no portfolio of investments. ETNs do not own anything they are actually tracking, instead they use derivatives to track the index.

As ETNs are unsecured bonds they have an additional risk compared with ETFs, which is that their value will be affected by the credit rating of the issuer. The value of an ETN may drop even though there is no change in the underlying index, if the issuing bank's credit rating is downgraded, while repayment of the investment is dependent on the ability of the issuing bank to meet its commitments and in the event of default by the bank investors may receive nothing at all.

J Property-based investments

As an alternative to direct property investment, it is possible to invest indirectly through:

- shares in listed property companies;
- property unit trusts and investment trusts;
- insurance company property funds; and
- Real estate investment trusts (REITs).

Each of these has different investment characteristics from direct property investment.

J1 Shares in listed property companies

A much more liquid way to invest in property than a direct investment, is to own shares in one of the property companies listed on the London Stock Exchange.

Such an investment differs from a direct investment in the following ways:

- the investment is diversified over a number of different properties;
- share prices are affected by the quality of the management and the level of borrowing, as well as the underlying asset value of the property portfolio;
- property shares can be highly geared as the companies usually borrow to purchase more property, making the shares more volatile;
- the share prices will rise and fall independently of the underlying asset values, depending on the forces of supply and demand:
 - they will also be affected by the risks that affect the stock market as a whole, such as general economic conditions, as well as those that are specific to the company; and
- the company will be liable to corporation tax on capital gains and rental income.

There is a range of different property companies specialising in different areas and with different investment objectives:

- some hold property as an investment – they are property companies that act like professional landlords;
- others undertake developments – they are property development companies that are more like construction companies; and
- many do both.



Risk and returns

Different companies provide different returns, with varying levels of risk:

- the returns from a development company that sells buildings on completion can fluctuate quite widely, since its profits from sales can be erratic; and
- a company that holds onto a property it has developed usually has a secure income, since its revenues come mainly from the regular rent paid by tenants.

It should be possible to select property companies that match the requirements and investment objectives of individual investors.

J2 Property unit trusts and investment trusts

A convenient way of investing in the property market, for an investor with limited funds, can be through an authorised unit trust or investment trust. Both give a wide exposure to the property market, providing diversification, with sufficient liquidity to ensure that investors can realise their holdings, in whole or part, when needed.

Authorised unit trusts are permitted to invest in the shares of property companies, or directly in property itself:

- unlike property companies, they cannot borrow money as easily to invest; and

- the price of units is directly linked to the value of the investments held in the fund.

Funds that invest substantially in property are allowed to delay redemption to raise money to pay investors. The maximum period permitted between redemptions is six months.

Investment trusts are required to invest primarily in the shares and securities of property companies and can hold only a relatively small percentage in direct property:

- they can borrow money for investment purposes, which is riskier; and
- the share price will move independently of the net asset value (NAV), depending on the level of demand.



Capital gains tax

As with all unit trusts and investment trusts, there is no CGT on investments within the funds. The investor is only subject to CGT when gains are realised on disposal.

It is possible to hold funds that invest directly in property in an ISA, provided they do not restrict an investor's ability to access their funds.

J2A Property authorised investment funds (PAIFs)

Since 2008, authorised investment funds that invest mainly in property, including UK and non-UK REITs, can elect a tax treatment that moves the point of taxation from the fund to the investor, in the same way as would apply to a direct investment in property.

Under the property authorised investment funds (PAIFs) regime, rental profits and other property-related income is exempt from taxation in the fund.

The property income is ring-fenced in the PAIF, and other taxable income is subject to corporation tax at 20%.

Distributions made to investors are split into three types of income: property income, other taxable income (primarily interest and non-UK dividends) and UK dividend income.

- Interest is paid net of basic rate tax, which is reclaimable by non-taxpayers. Since 6 April 2017 PAIF distributions of interest are paid gross to investors.
- Tax continues to be deducted from property income distributions (PIDs).
- Dividends are also paid without the deduction of any tax, i.e. they are paid gross.

Only OEICs can qualify as PAIFs, so an authorised unit trust would have to convert to an OEIC.



Main conditions for PAIFs

The main conditions that PAIFs have to meet include:

- at least 60% of the PAIF's net income in an accounting period must be from the exempt property investment business;
- at the end of each accounting period, the value of the assets involved in the property investment business must be at least 60% of the total assets held by the PAIF; and
- its shares must be widely held, with no corporate investor holding 10% or more of the fund's NAV.

J2B Insurance company property funds

Life assurance companies generally have funds that specialise in direct holdings of commercial property. These are usually available as both regular and single premium unit-linked life assurance contracts.

The main features are:

- the value of units is directly linked to the value of the property in the portfolio, and is established by regular professional valuations;
- the funds cannot borrow money;
- liquidity is significantly higher than with direct property investment, although encashment can sometimes be suspended for a specific period in difficult market conditions; and
- any income and capital gains are subject to up to 20% tax within the fund.

J3 Offshore property companies

A number of investment groups have set up unauthorised investment trusts as offshore companies. This structure avoids the restrictions placed on authorised investment trusts and allows them to invest 100% of their assets directly in property rather than property companies. The companies usually obtain a UK stock market listing, so that their shares are eligible for inclusion in ISAs.

An offshore structure generally results in the fund paying less corporation tax than an onshore company, although the exact amount depends on where the company is based. The company is not liable to UK corporation tax, but is liable to UK income tax at the basic rate on rental income from UK property (net of debt financing and allowable expenses). The company would not be liable to tax on capital gains.



Taxation

UK resident investors receive dividends gross. Where the company is a UK-listed, closed-ended investment company, any gains on disposal of shares are taxed under capital gains rules. The first £5,000 of dividend income received in this tax year is tax free. Sums above that will be taxed at 7.5% for non-taxpayers and basic-rate taxpayers, 32.5% for higher-rate taxpayers, and 38.1% for additional-rate taxpayers.

J4 Real estate investment trusts (REITs)

REITs became available in 2007 and have a similar structure to the REITs that have been available for many years in a number of countries, including the USA, Australia and France.

The aim of a REIT is to provide a savings and investment vehicle that:

- provides a liquid market in property investment;
- is widely accessible by the private investor; and
- has a tax treatment that is closely aligned to the tax arrangements in place for direct investment in property.

J4A Basic structure

REITs must be closed-ended companies. When first introduced they had to be listed on a recognised stock

exchange (which excluded AIM companies). However, since July 2012 this rule has been relaxed, enabling AIM-traded companies to obtain REIT status. They must be resident in the UK for tax purposes, can issue only one class of ordinary share and cannot be OEICs.

A REIT usually has two separate elements for tax purposes:

- a ring-fenced property letting business, which is exempt from corporation tax (except on sales of certain property developments); and
- the remaining non-ring-fenced business, which contains any other activities, e.g. the provision of property management services:
 - profits and gains from this business are subject to corporation tax.

Certain conditions must be met to qualify as a REIT:

- at least 75% of the company’s total gross profits must be from the property rental business (the tax-exempt business);
- at the beginning of each accounting period, the value of the assets in the tax-exempt business must be at least 75% of the total value of the assets (ignoring secured loans) held by the company; and
- REITs cannot have an excessive amount of debt financing:
 - interest on borrowings has to be at least 125%, covered by rental profits (before deducting interest costs), because below this level the company will be taxed on the excess interest.

Table 6.9: Tax treatment	
Internal tax	<ul style="list-style-type: none"> • At least 90% of the profits of the tax-exempt business (income, not capital gains), arising in an accounting period, must be distributed as a dividend within twelve months of the end of the accounting period. Stock dividends can be issued in lieu of cash dividends for the purpose of the distribution requirements. • Property can be developed within the ring-fenced, tax-exempt business, providing it is for the purpose of generating future rental income, i.e. it is added to the property portfolio. • If a property is developed to be sold for a profit, then the disposal would be treated as non-tax exempt and corporation tax would be payable. However, where a property is developed for investment purposes but later sold, providing a period of three years has elapsed, the sale will be treated as tax-exempt.
Investor tax	<ul style="list-style-type: none"> • Distributions from REITs can comprise of two elements: <ul style="list-style-type: none"> ◦ A payment from the tax-exempt element. For individual investors this is treated as UK property income, and will be paid net of basic-rate tax (20%). Non-taxpayers can reclaim the tax deducted. ISA investors receive payments gross. Higher- and additional-rate taxpayers will pay extra as shown in the example below. ◦ A dividend payment from the non-exempt element. This is treated in the same way as any other UK dividend. Whether they owe any further tax depends on the investor’s individual tax position as shown in the example below. • Gains on REIT shares are subject to CGT in the usual way.



Example 6.14

Tax exempt element

If a shareholder holds 100 shares and the UK REIT declares a distribution of £1 per share, the company pays £80 to the shareholder and £20 to HMRC. The amount charged to the shareholder will be £100 (£80 cash paid and £20 tax deducted). Non-taxpayers can reclaim the tax deducted at source. Income from UK property is chargeable to tax at 20% for basic-rate taxpayers (so they will have nothing further to pay), at 40% for higher-rate taxpayers and at 45% for additional-rate taxpayers

(who will need to pay an additional 20% and 25% of the gross income respectively).

Non-exempt element

UK resident investors receive dividends gross. The first £5,000 of dividend income received in this tax year is tax free. Sums above that will be taxed at 7.5% for basic-rate taxpayers, 32.5% for higher-rate taxpayers, and 38.1% for additional-rate taxpayers.

K Private equity

Private equity is regarded by some as an asset class in its own right and involves providing medium- to long-term finance in return for an equity stake in potentially high-growth, unquoted companies. Investment in small new businesses is riskier than investing in listed companies, mainly because some new businesses will fail, but also because the investment may be difficult to realise. Some private equity funds specialise in a particular sector or type of company, while others are more general.

Some of the main ways in which investment in this asset class can be achieved are through:

- enterprise investment scheme (EIS);
- seed enterprise investment scheme (SEIS); and
- venture capital trusts (VCT).

These products may involve higher charges than other funds. This is because a significant amount of time will be spent researching and spending time with the management team of small fledgling companies.

K1 EIS

EIS was set up by the UK Government to encourage private investment in small, higher-risk, unquoted UK companies by providing tax incentives provided that the company meets certain criteria.

K1A Tax relief

Income tax relief at 30% is given for qualifying investments.

Relief can be claimed up to a maximum of £1m invested in EIS shares, giving a maximum tax reduction in any one year of £300,000 (provided there is an income tax liability to cover it).

The relief is given as a reduction to the investor's tax liability.

The current tax regime has the following characteristics:

- relief is withdrawn if the shares are disposed of within three years, except to a spouse and not on the death of the investor; and
- an investor may carry back income tax relief to the previous tax year by claiming that the qualifying shares are treated as having been issued in the previous year, and as long as the annual limit for the purposes of calculating income tax relief in any particular tax year is not exceeded.

Payment of tax on a capital gain can be deferred by reinvesting the gain into an EIS company. Where only this relief is claimed (CGT deferral relief), there is no upper limit. This works as follows:

- reinvestment must take place in the period beginning one year before and ending three years after the disposal giving rise to the gain;
- the deferred gain is brought into charge when the EIS shares are disposed of, unless a further qualifying reinvestment is made;
- the CGT rate applied to a deferred gain will be the rate at the time the deferral ends and the gain becomes liable to tax;
- gains arising on the disposal of EIS investments that qualified for income tax relief are exempt from CGT, as long as the shares have been held for three years;
- losses on EIS investments are allowable where either income tax relief or CGT deferral relief has been obtained, although a deduction is made for the initial income tax relief that has been given. A loss can be set against either chargeable gains or income.



Shares held for at least two years

If the shares are held for at least two years, they qualify for 100% business relief as unquoted companies and so attract 100% relief from IHT.

K1B Main conditions for EIS relief

The main conditions for EIS relief are as follows:

- tax relief is given to qualifying individuals who subscribe for eligible shares in a qualifying company carrying on a qualifying business activity;
- a qualifying individual is someone who is not connected with the company when subscribing, although they can subsequently become a paid director of the company;
- a non-UK resident is eligible, but can only claim tax relief against any liability to UK income tax;
- no income tax relief is given if more than 30% of the capital is acquired, although CGT deferral relief would still be available;
- **eligible shares** are new ordinary shares that are not redeemable for at least three years;
- a **qualifying company** must be unlisted when the shares are issued, and there must be no arrangements at that time for it to become listed;
- a company raising money under an EIS must have fewer than 250 full-time employees at the date on which the shares are issued;
- the gross assets of the company must not exceed £15 million immediately before the issue of shares, nor £16 million immediately afterwards;
- to qualify for relief the company must have raised no more than £5 million under all venture capital schemes in the twelve months ending on the date of investment:
 - if the limit is exceeded, none of the shares will qualify for relief under the EIS;
- the company must carry on a qualifying trade and have a permanent establishment in the UK, which can include companies whose shares are traded on the AIM; and
- there must not be any pre-arranged exit provisions designed to minimise investment risks.

Since 6 April 2015 companies benefiting substantially from subsidies for the generation of renewable energy have been excluded from also benefiting from EIS.

K1C EIS – risks

Investing in unlisted trading companies is a high-risk activity as there is a possibility of the companies

failing. An EIS must be held for three years to retain the income tax and CGT relief. Even after that period it may be difficult to dispose of the shares, as the market is likely to be very illiquid or even non-existent.

K1D Seed Enterprise Investment Schemes (SEISs)

SEIS is designed to help small start-up companies raise equity, offering tax reliefs to individual investors who buy new shares in those companies. It runs alongside EIS, but in recognition of the problems which young companies face in attracting investment, it offers tax relief at a higher rate than EIS. SEIS applies to shares issued on or after 6 April 2012. Its rules are designed to reflect EIS, because it is thought that companies may want to go on to use EIS after an initial investment under SEIS.

Reinvestment relief allows an individual to treat 50% of a gain as exempt from CGT, if SEIS shares are acquired. You cannot get reinvestment relief unless you also get income tax relief.

Income tax relief is available at 50% of the cost of the shares, on a maximum annual investment of £100,000. The relief is given by way of a reduction of tax liability, providing there is sufficient tax liability against which to set it. The shares must be held for a period of three years from the date of issue for relief to be retained. If they are disposed of within the three-year period, relief will be withdrawn or reduced.

You can also ‘carry back’, which means you can treat the cost of shares bought in a tax year as if they had been bought in the previous year. The tax relief for the previous year is also given, up to the allowed limit for each year. (The ‘carry-back’ facility equally applies for capital gains re-investment relief as it does for income tax relief).

If income tax relief was given on the cost of the shares (and not later withdrawn) and the shares are disposed of after three years, any gain is free from CGT.

100% inheritance tax relief is also available after two years.

The main conditions are that the company must:

- be unquoted at the time of issue of the shares;
- employ 25 people or less;
- be no more than two years old;
- have less than £200,000 in gross assets; and
- meet the qualifying trade rules.
 - most trades qualify but some don't, e.g. dealing in land, commodities, financial activities like banking and insurance, and property development.

Since 6 April 2015 companies benefiting substantially from subsidies for the generation of renewable energy have been excluded from also benefiting from SEISs.



Useful website

This list is not exhaustive; see www.gov.uk/guidance/seed-enterprise-investment-scheme-background for more information.

K2 Venture Capital Trusts (VCTs)

The VCT scheme was designed to encourage individuals to invest in certain types of small, higher-risk trading companies not listed on the official list of any stock exchange.

VCTs are very similar to investment trusts since both are listed companies, run by fund managers who are generally members of larger investment groups. Investments in both can be made by subscribing for new shares when a trust is launched, or by purchasing shares from other investors after the trust is established.



Shares and securities in a VCT

A VCT must predominantly hold the shares and securities of unlisted companies.

By investing in a VCT investors are able to spread the investment risk over a number of companies.

K2A Tax relief

Income tax relief is at 30% up to a maximum investment of £200,000 in new issues of ordinary shares in VCTs.

Dividends received from VCT investments of up to £200,000 per tax year are exempt from income tax (whether acquired by subscription or by purchase from another shareholder).

Gains arising on the disposal of VCT shares that were acquired by subscription or purchase are exempt from CGT and there is no minimum period for which the shares must be held.

Any losses on VCT shares are not allowable losses for CGT purposes. Neither are they available to offset against other capital gains.

Income tax relief is taken back if the shares are not held for at least five years.

K3 Conditions to qualify as a VCT

VCTs have to be approved by HMRC and must satisfy a number of conditions. The main ones are:

- must be listed on the London Stock Exchange;
- all money raised must be used within two years;
- its income must be wholly or mainly derived from shares or securities, and it must not retain more than 15% of the income;
- at least 70% of its investments by value must be in **qualifying holdings**, which are newly issued shares in qualifying, unlisted trading companies, including companies traded on AIM;
- not more than 15% of its total investment must be invested in any single company or group;
- at least 70% of its qualifying holdings by value must be in new ordinary shares that have no preferential rights;
- at least 10% of the total investment in any one company must be in ordinary, non-preference shares;
- a company raising money under a VCT must have fewer than 250 full-time employees at the date on which the shares are issued; and

- to be a qualifying holding of a VCT, a company must have raised no more than £5 million under all venture capital schemes in the twelve months ending on the date of the investment. For instance:
 - If the limit is exceeded, none of the shares will rank as a qualifying holding for a VCT.

Other features include:

- Since 6 April 2015, companies benefiting substantially from subsidies for the generation of renewable energy have been excluded from also benefiting from VCTs.
- Investments in VCTs that are conditionally linked in any way to a share buyback, or that have been made within six months of a disposal of shares in the same VCT, have been excluded from qualifying for new tax relief since 6 April 2014.
- Investors can subscribe for VCT shares through nominees.
- For shares issued on or after 6 April 2014, VCTs will be prevented from returning capital that does not relate to profits on investments within three years of the end of the accounting period in which shares were issued to investors.
- The company must also satisfy a number of other conditions broadly similar to EIS companies.



Taxation

A VCT is exempt from corporation tax on gains arising on the disposal of its investments, and these realised gains can be distributed to investors as dividends with no additional tax liability for the investor.

HMRC will give provisional approval to a VCT if it is satisfied that the conditions will be fulfilled within specific time periods. However, a VCT must at all times have 70% of the value of its investments in qualifying holdings to gain and retain approval.

Where a VCT makes a cash realisation on the disposal of an investment that had been part of its qualifying holdings for at least six months, the disposal will be ignored for the next six months for the purpose of the 70% test. This will give the VCT up to six months to reinvest or distribute the disposal proceeds.



Question 6.8

In what ways are VCTs similar to investment trusts?

K4 VCTs – risks

A VCT has a five-year holding period for the retention of income tax relief, although it may be difficult for an investor to sell their shares after that time, even though the shares are listed. The demand for existing shares is likely to be quite weak, since the tax relief is only available on subscriptions of new shares, not those bought in the market.



Consider this...

A VCT is a pooled investment, although the underlying investments are relatively high risk, while an EIS, although it can be purchased as a fund, can also be an investment in just one company.



Be aware

The following changes were made to VCT and EIS as a result of the Finance Act 2015

- They are not allowed to invest in companies seven years or older after their first commercial sale took place, and ten years or older for knowledge-intensive companies. (This rule does not apply where the investment represents more than 50% turnover averaged over the previous five years.)

- There is also a cap on the total investment a company can receive from EISs and VCTs of £12 million, or £20 million for knowledge-intensive companies.
- Knowledge-intensive companies can employ up to 500 people, unlike 250 for other companies.
- There are also new rules to prevent the use of EISs or VCTs to fund buyouts, including management buyouts to VCT non-qualifying holdings and VCT funds raised before 2012.

Also, the requirements of the EIS, SEIS and VCT will be amended to:

- clarify EIS and SEIS rules for share conversion rights;
- provide additional flexibility for follow-on investments made by VCTs in companies with certain group structures, for investments made on or after 6 April 2017; and
- introduce a power to make VCT regulations in relation to certain share-for-share exchanges to provide greater certainty to VCTs, which will be effective from the date of Royal Assent.

L Individual savings accounts (ISAs)

L1 Introduction

An ISA is not itself an investment; it is a wrapper within which a wide range of savings and investment products can be held free of UK income tax and CGT.

ISAs allow individuals to hold cash deposits, certain life assurance policies and investments in UK and overseas shares, corporate and government bonds. These can be held directly or through collective investment schemes. They can only be operated by HMRC approved account managers.



Taxation

Investors do not pay income tax on any interest or dividends they receive from the investments held in an ISA, nor CGT on any gains made on disposal of the ISA.

L2 Eligibility

An ISA investor must be an individual who is:

- resident in the UK for tax purposes;
- a Crown employee, such as a diplomat or member of the armed forces who is working overseas and paid by the UK Government:
 - spouses and civil partners of such individuals are also eligible to subscribe;
- aged 18 or over to invest in a stocks and shares ISA;
- aged 18 or over to invest in an innovative finance ISA;
- aged 18–40 to invest in a Lifetime ISA, and
- aged 16 or over to invest in a cash ISA. For instance:
 - however, if the capital is derived from a parent, and the interest together with any other income from all capital provided by the parent is more than £100 a year, the income will be treated as the income of the parent until the child reaches age 18, and
 - the income must be reported on the tax return of the parent, and may not be tax-free.



Consider this...

If an ISA holder ceases to be resident in the UK, they can keep the ISA and retain the tax benefits, but cannot pay in any further money.

An ISA may only be arranged on an individual basis and cannot be assigned or placed in trust.

L3 Structure of ISAs

Investors can subscribe to the following types of ISA:

- cash ISA;
- stocks and shares ISA;
- innovative finance ISA (IFISA); and
- Lifetime ISA.

L4 Subscription limits

There is an annual maximum overall subscription limit, which in 2017/18 is £20,000. This can be spread amongst the available ISAs.

Since April 2016, individuals can withdraw money from their cash, innovative finance or stocks and shares ISA, and replace it in the tax year without it counting towards their annual ISA subscription limit for that tax year.

L5 How to invest

Applications may be made in writing, by phone or online. Applications can allow for subscriptions to be made in the year of application, and in each successive year in which the applicant subscribes. This allows, for example, a continuous subscription by direct debit, provided at least one payment is made in each tax year.

Applications cease to be valid at the end of a tax year in which the investor fails to make a subscription. When this happens, the investor must make a fresh application before subscriptions can recommence.

Investment may be made by way of cash, including direct debit, credit and debit card, and electronic transfer. Gifts of cash from third parties are acceptable.

Investment in a stocks and shares ISA can be in the form of a CGT-free direct transfer of shares from an approved share-incentive plan or a savings related share option scheme (SAYE). The shares must be transferred within 90 days from the date they emerge from the scheme. The value of shares at the date of transfer counts towards the annual subscription limit.



How it works **Investing in an ISA**

It is not possible to transfer newly issued or windfall shares into a stocks and shares ISA. All share transfers other than employee share schemes as described above, are by way of sale and reinvestment.

L6 Tax advantages

ISA investments are free of UK income tax and CGT.

Withdrawals can be made at any time without loss of tax relief (subject to the ISA manager's terms and conditions):

- Interest, dividends and property income distributions from ISA investments are exempt from any income tax.
- All interest earned is credited gross.
- The manager receives interest distributions from corporate bond funds and mixed funds that hold both equities and bonds (where at least 60% of the fund is invested in bonds) without the deduction of any income tax.
- Property income distributions from REITs are paid gross to ISA managers.
- Capital gains on ISA investments are exempt from CGT, although losses cannot be allowed against gains made elsewhere.

In respect of **life assurance policies held in an ISA:**

- the insurer does not have to pay tax on income and capital gains on investments used to back ISA policies; and
- the investor has no tax to pay on withdrawals, or when the policy is cashed.

Any interest, dividends or property income distributions received by an investor from an ISA are exempt from tax and do not have to be reported to HMRC on the individual's tax return.



Consider this...

This can benefit an investor who is entitled to MCA. It also reduces the risk of an investor becoming liable to pay higher-rate tax.

L7 Invalid ISAs

If an investor exceeds the overall subscription limit, the excess subscriptions are invalid.

After the end of a tax year, when the ISA managers make their returns, the Savings Scheme Office (SSO) identifies if there has been an invalid subscription. The SSO will notify the ISA manager and the investor of the error and the action that needs to be taken:

- Where necessary they will arrange with HMRC to repay any tax relief that has been given in error:
 - the investor will be given details of any income or gains from the investments, which must be reported to their tax office if they are due to pay tax.
- Where an ISA holds life assurance, the policy must end if the subscription is invalid:
 - the policy may give rise to a taxable gain if the proceeds are greater than the premiums paid.
- The ISA manager will repay any tax due to HMRC at the basic rate, but the investor must report the gain to their tax office and may have to pay more tax if they are a higher-rate taxpayer.

L8 Investment rules

There are strict rules regarding the investments that can be held within an ISA.

L8A Eligible investments

Eligible investments in an ISA include:

- Shares that are officially listed on a recognised stock exchange anywhere in the world, including those on AIM. Shares in unquoted companies do not qualify.
- Small- and medium-sized enterprise securities (not just equities) admitted to trading on a recognised stock exchange.
- Corporate bonds that are officially listed on a recognised stock exchange.
- Listed bonds issued by a cooperative and community benefit society.
- Gilts and similar securities issued by governments of countries in the European Economic Area (EEA) and ‘strips’ of all these securities.
- UK-authorized unit trusts and OEICs.
- Units or shares in a non-undertakings for collective investment of transferable securities (UCITS) retail scheme, provided they do not restrict the ability of savers to access their funds by more than two weeks (limited redemption funds are not eligible).
- UK-listed investment trusts (including REITs).
- Units or shares in an FCA-recognised UCITS scheme.
- Shares acquired within the previous 90 days from a SAYE or a share incentive plan. This applies even where the shares would not otherwise be qualifying investments (e.g. because they are not listed on a recognised stock exchange).
- Units in a stakeholder, medium-term investment product, which can consist of unitised investments and unitised insurance investments.
- Life assurance policies criteria include.
 - must be on the life of the ISA investor alone – joint life or multiple life and ‘life of another’ policies are not permissible;
 - must be a life assurance contract and can include supplementary health benefits (e.g. sickness, critical illness, accident) and waiver of premium benefit – it must not be an annuity, a personal portfolio bond or a pension;
 - must not incorporate a requirement to pay any further premiums after the first (although policy terms may favour the payment of additional amounts) and may not be used as collateral for a loan or placed in trust.
- Certain Core Capital Deferred Shares (CCDS) issued by a building society.
- Certain securities, such as retail bonds, which have less than five years to run to maturity at the time they are first held in the account.


L9 Stakeholder standards

The Government introduced stakeholder standards in 2005, which apply to a wider range of products than just ISAs. Products (other than smoothed investment return products) that meet the stakeholder standards can be sold through ‘basic advice’.

To earn the name ‘stakeholder’ the products have to meet conditions designed to ensure that they are straightforward and good value.

Stakeholder products

There are three stakeholder products that can be held in an ISA:

- 
- stakeholder deposit account;
 - stakeholder medium-term investment product (MTIP), which is a type of unit trust or similar investment; and
 - smoothed MTIP, similar to a with-profit life assurance policy.

L9A Stakeholder conditions

The minimum conditions for stakeholder products are as follows:

Cash ISAs – Stakeholder deposit account:

- There are no charges to pay on stakeholder cash ISAs.
- The minimum deposit cannot be higher than £10.
- Deposits can be made to the account in any of the following ways: cash, cheque, direct debit, standing order, direct credit (BACS or automated transfer).
- Unlimited withdrawals can be made, and these should be paid within seven days or less.
- The interest rate that is paid must be no less than 1% below the Bank of England base rate.
- If the base rate increases, the minimum interest rate must also increase within one month.

Stocks and shares ISAs – Stakeholder medium-term investment products:

- The annual charge is limited to 1.5% of the fund during the first ten years and 1% thereafter, with no other charges.
- The minimum investment cannot be higher than £20.
- No more than 60% of the fund can be invested in riskier assets such as shares and property.
- Investments can be made to the account in any of the following ways: cash, cheque, direct debit, standing order, direct credit (BACS or automated transfer).
- The prices at which units or shares in the fund are bought and sold must be the same, and the price should be published daily.

Extra terms apply to the smoothed MTIP:

- Some of the return in good years is paid into a ‘smoothing account’ to be used to top up the return in bad years.
- If the smoothing account needs extra capital, policyholders can be charged extra.
- Managers must make available information about their policies on smoothing and charging.
- The whole of the with-profit fund and the whole of the smoothing account, apart from specific deductions allowed by law, are for the benefit of the policyholders.

L10 Types of ISA

The main types of ISA now available are:

- **Unit trust and OEIC ISAs**

These are very popular ISAs. They provide a broad spread of holdings for relatively small investments. ISAs may be linked to one or more funds and many managers offer an extensive choice of funds.

Corporate bond ISAs, based on unit trusts and OEICs, have also proved to be very popular. In particular, high-yield bond funds, investing in sub-investment grade bonds, have attracted many

income seekers.

ISAs may also be invested in any UCITS scheme recognised by the FCA.

- **Investment trust ISAs**

Investment trust ISAs are similar to their unit trust and OEIC counterparts, but usually carry explicit additional charges to those levied within the investment trust. The choice of investment trusts is smaller than for unit trusts and OEICs.

- **Managed ISAs**

Some stockbrokers use ISAs as a component of large equity portfolios. The CGT freedom of ISAs means that they can be used to shelter the actively traded part of a portfolio.

- **Self-select ISAs**

These allow the more sophisticated investor to select their own ISA equity and bond holdings, including collective funds. Some account managers restrict their choice to FTSE 100 constituents, but others will allow investors to choose any eligible investment.

The combination of charges and the relatively small income tax benefits mean that self-select ISAs appeal to higher- and additional-rate taxpayers who regularly use their CGT annual exempt amount.

- **Corporate ISAs**

Some listed companies use external account managers to offer ISAs that may only invest in that one company's shares. Charges are generally low because the sponsoring company subsidises costs from the savings it makes on individual share registration. Nevertheless, the small income tax benefit of ISAs means many investors will be better off holding their shares directly.

- **Derivative-based ISAs**

A small number of ISA managers have used Dublin-based, listed companies holding derivatives and cash deposits to offer 'guaranteed' ISAs. This tortuous structure allowed the creation of plans that could not be offered through UK-based funds.

Derivative-based ISAs typically offer a stock market, index-linked capital return at the end of three to five years and either a fixed income or a minimum maturity guarantee.

- **Cash ISAs**

The cash ISA is basically a tax-free deposit account. A full range of instant access and fixed-term and/or fixed-rate accounts is available. A handful of providers offer terms linked to stock market index performance rather than to interest rates.

- **Help to buy ISAs**

The help to buy ISA is a type of cash ISA for first-time buyers, which offers a Government bonus when investors use their savings to buy their first home. For every £200 saved, a £50 bonus payment is made, up to a maximum of £3,000. If £12,000 is saved, then the Government will boost this to £15,000. The bonus is available for home purchase of up to £450,000 in London and up to £250,000 elsewhere.

The bonus only applies for home purchase. However, savers can have access to funds if they need them for any other purpose. The maximum initial deposit is £1,000 and the maximum monthly saving is £200.

The help to buy ISA will be open for new savers until 30 November 2019 and open to new contributions until 2029. Savers can save into a help to buy ISA and a Lifetime ISA, but will only be able to use the Government bonus from one of their accounts to buy their first home.

During the 2017/18 tax year only those who already have a help to buy ISA will be able to transfer the funds into a Lifetime ISA and receive the Government bonus on those savings.

- **Innovative finance ISAs (IFISAs)**

These enable savers who use peer-to-peer lending platforms to receive tax-free interest and capital gains up to the annual ISA allowance. Peer-to-peer lending allows savers to lend directly to borrowers, therefore cutting out the need for a bank. This is seen by the government as a way of encouraging competition in the banking industry. It is possible to switch existing ISA funds into an innovative finance ISA, thereby retaining the tax-free status of such an investment.

- **Lifetime ISAs**

The Lifetime ISA was launched in April 2017 enabling savers under the age of 40 to receive a 25% bonus from the Government. They can pay in up to £4,000 a year and will receive an annual bonus of up to £1,000 until the age of 50. Qualifying investments in a Lifetime ISA will be the same as for cash or stocks and shares ISAs.

Also since April 2017, all savers will be able to put up to £20,000 a year into ISAs. It will be possible to have a cash ISA, a stocks and shares ISA, an innovative finance ISA as well as a Lifetime ISA – all within the new overall ISA limit of £20,000.

Savers with a help to buy ISA will be able to transfer their savings into a Lifetime ISA, or continue to save in both, but they will only be entitled to use the bonus from one ISA to buy a house.



Question 6.9

Name four eligible investments for a stocks and shares ISA.

L11 Charges and expenses

The structure of ISA charges is not regulated in the same way as that for unit trusts and OEICs, although there is a voluntary maximum charging structure with stakeholder products. The greater freedom has resulted in a variety of charging structures for stocks and shares ISAs, including **initial** and **annual charges**.

L11A Initial charge

For a stocks and shares ISA that holds unit trusts or OEICs, the initial charge will generally be the standard initial charge (typically 5%), but a growing number of groups discount this down to 2%–3%. The advent of fund platforms has seen actual buying costs fall to less than 1% in some instances.

Other things to bear in mind include:

- some groups make no initial charge, either because they are selling direct or because early encashment penalties are applicable – usually for five years;
- for unit trusts and OEICs the initial management charges must be taken from the ISA subscription, i.e. they cannot be in addition to the usual subscription limit; and
- charges and fees on direct investments in an ISA may be levied over and above the subscription limit.

L11B Annual charges

Unit trust and OEIC annual charges are usually between 1% and 1.5%, and virtually all ISAs levy only this charge. On most funds, annual charges can be increased by first giving investors notice. Additional fees, e.g. for custody, may add 0.1%–0.5%.

Investment trusts carry their own internal annual charge, which may be as low as 0.3% for large general trusts. However, most investment trust ISAs incorporate an additional AMC of around 0.5% (plus VAT) or between £25–£30 (plus VAT).



Non-collective investment ISAs

Many non-collective investment ISAs operate on an annual charge of between 0.5%–1% (plus VAT). This may be subject to a minimum charge of £15 (plus VAT) to discourage small investments. Some self-select ISAs charge no annual fee, but collect their expenses in other ways.

L11C Other charges

Alongside these two main charges, ISA managers also generate income from other levies:

- **Early encashment penalties**

Some unit trust and OEIC ISAs have low or zero initial charges, but then impose an early encashment penalty over the first three to five years. This may be expressed as a percentage of the original investment or current value.

Some ISA providers, particularly on self-select ISAs, also levy a termination fee when the plan is cashed or transferred.

- **Commission**

The purchase or sale of investment trusts or shares will usually involve stockbroking commission. This may be a flat rate charge, at the full private client rate or, in the case of some investment trusts and ISAs, at a specially discounted bulk rate of 0.2%–0.5%.

- **Dividend collection fee**

Self-select ISA managers may levy a fee on each dividend, in place of an annual charge. This is VAT-free and is usually between £4 and £7.50, which favours larger shareholdings.

- **Report charges**

Share-based ISAs will often levy a substantial fee, e.g. £50 (plus VAT), for investors who wish to receive annual reports or attend shareholder meetings. The size of the fee is designed to be a deterrent – in practice, annual reports are usually easily obtainable from other sources.

L12 Transfers between ISA managers

The regulations stipulate that ISA managers have to allow transfers, although there is no corresponding requirement for managers to accept transfers. It is possible to transfer ISA savings to a different type of ISA or to the same type of ISA. For example:

- Transferred savings relating to any current year's payments must be transferred as a whole and money invested in previous years can be transferred in full or in part.
- If cash and assets are transferred from a Lifetime ISA to a different ISA before the age of 60, a withdrawal fee of 25% is levied.
- You can transfer cash from an innovative finance ISA to another provider, but it may not be possible to transfer other investments from it.
- ISA transfers should take no longer than 15 working days for a cash ISA and a cash Lifetime ISA and no more than 30 working days for a stocks and shares ISA, investments held in an innovative finance ISA and stocks and shares in a Lifetime ISA.

Subject to the terms and conditions of both managers, ISAs may be transferred in a variety of ways:

- investments may be re-registered in the new ISA manager's name;
- transfers may be made in cash; or
- transfers can be made in a combination of investments and cash.

ISA managers must transfer investments and/or cash direct to the new ISA managers because if the transfer is made to the investor it will be treated as a withdrawal.

It is possible to transfer cash from an innovative finance ISA to another provider, but you may not be able to transfer other investments from it. The provider's terms and conditions would need to be checked for restrictions on transfer. It will also be possible to switch existing ISA funds into an innovative finance ISA, thereby retaining the tax-free status of such an investment.



Preservation of tax benefits

Where an ISA is transferred all the tax benefits are preserved. Investments and/or cash transferred are not treated as new subscriptions.

L13 Termination

There is no tax charge on the termination of an ISA; however, as the ISA is exempt from CGT any capital losses are not allowable against other gains. The charges on termination will usually be the same as those on transfer.

An investor may withdraw either cash or investments from the plan. If investments are withdrawn, their base cost for capital gains purposes is the market value at the date of their withdrawal.

Since 3 December 2014, if an ISA holder in a marriage or civil partnership dies, their ISA benefits can be passed on to their spouse or civil partner by an additional ISA allowance. The surviving spouse or civil partner will be allowed to invest as much into their own ISA as their spouse/partner used to have, in addition to their own annual ISA limit.



Consider this...

The new ISA death benefit rule does not save IHT; however, transfers of any assets between spouses on death are IHT-free. If there is no surviving spouse or civil partner, the market value of the plan at death will form part of the deceased's estate. The ISA manager may transfer either cash or investments to the personal representatives, and any tax due on income or gains arising after the date of death will have to be accounted for by them.

L14 Junior ISAs and Child Trust Funds (CTFs)

L14A Junior ISA

The key features of the Junior ISA (JISA) are set out below:

Eligibility:

- All UK-resident children (aged under 18) who do not have a child trust fund (CTF) are eligible.

Types of account:

- Both cash and stocks and shares JISAs are available.
- The qualifying investments for each of these are the same as for existing ISAs.
- Children are able to hold up to one cash and one stocks and shares JISA at a time.
- All returns are tax-free both for the child and their parents.

Annual subscription limit:

- Each eligible child can receive contributions of up to £4,128 in the 2017/18 tax year.
- Any person or organisation is able to contribute to a child's JISA.
- There are no rules on how contributions have to be allocated between cash and stocks and shares JISAs.

Account opening

- Anyone with parental responsibility for an eligible child is able to open a JISA on their behalf.
- Eligible children at the age of 16 are also able to open JISAs for themselves.

Account operation

- Until the child reaches 16, accounts will be managed on their behalf by a person who has parental responsibility for that child.
- This will initially be the person who applied for the account for the child, but this responsibility can be transferred to another person with parental responsibility.
- At age 16, the child assumes management responsibility for their account.
- Withdrawals are not permitted until the child reaches 18 except in cases of terminal illness or death.

Transfers

- It is possible to transfer accounts between providers, but it is not possible to hold more than one cash and one stocks and shares JISA at any time.
- It is possible transfer a CTF into a JISA.

Maturity

- At age 18, the JISA will, by default, become an adult ISA and funds will be accessible to the child.
- Having a JISA does not affect an individual's entitlement to an adult cash ISA. It is possible for JISA account holders to open adult cash ISAs from age 16, and JISA contributions do not impact upon adult ISA subscription limits.

L14B Child trust funds (CTFs)

CTFs were the predecessor to JISAs, and when they were launched in 2005 the government made contributions at specific ages (these have now stopped). They offer the same tax advantages as a JISA including the exemption from tax for income derived from parental gifts.

Every child born on or after 1 September 2002 was eligible for a CTF, provided:

- Child Benefit had been awarded for them by HMRC;
- the child was living in the UK (the children of Crown servants posted abroad qualified because they are treated as being in the UK); and

- the child was not subject to immigration controls.

There are three basic types of CTF account: savings, share accounts and stakeholder CTFs.

It is still possible to make contributions to existing CTFs. Contributions can be made by parents, relations and friends. In 2017/18, the amount that can be subscribed is £4,128.

Before the child reaches age 16, accounts are managed by a person who has parental responsibility for the child. At age 16 the child assumes management responsibility for their account. Withdrawals are not allowed until the child reaches 18 except in cases of terminal illness or death.

The CTF matures at age 18 at which point the underlying investments are re-registered in the (adult) child's name outside of the ISA wrapper although it is possible to roll over a CTF into an ISA to maintain the tax benefits.

M National Savings and Investments (NS&I) products

National Savings and Investments (NS&I) products are Government investments that can be bought online, by phone or by post directly from NS&I. (See [chapter 1, section A4](#).) They are all secure investments as they are guaranteed by the Government. There are several types of product, with different tax treatments.



Useful website

To remain up-to-date with NS&I products and the rates of interest being paid, you are advised to regularly check the Quick Guide for Financial Advisers from NS&I: www.nsandi.com.

N Purchased life annuities

An annuity is a contract to pay a given amount (the annuity) each year to an annuitant (the person on whose life the contract depends) whilst they are alive.

Purchased life annuities (PLAs) are bought from life assurance companies and are split into two elements:

- The capital element, which is tax-free as it is deemed to be a part return of the original capital. The capital element is fixed at the outset and is calculated by dividing the purchase price by the number of years the annuitant is expected to live from outset, using HMRC mortality tables. If the annuitant survives for the expected time, the purchase price is received tax-free.
- The income element, which is taxed as savings income.

The taxation of a PLA is more favourable than a pension annuity, which is taxed in full as income. Therefore, many individuals in retirement use the tax-free pension commencement lump sum (PCLS) to buy a PLA.

Various features can be added, such as capital protection in the form of a guarantee period, as well as a level or escalating annuity.

O Derivatives

Derivatives are financial contracts whose value is derived from the value of an underlying investment. Originally, the underlying investments were basic commodities, such as cocoa, coffee, sugar and wheat. In recent years the underlying investments have increasingly consisted of bonds, currencies, short-term interest rates, individual shares or stock market indices, such as the FTSE 100.

In the last 20 years the international markets in derivatives have grown into a major part of the world financial structure. In some markets the turnover has become much larger than the turnover of the underlying securities themselves.

Derivatives can be used for many purposes. They are usually used to reduce risk, although they can be used for speculation, which may increase risk. They have been blamed for adding to the volatility of the markets, but they may also give stability in many situations.

Few private investors participate directly in the derivatives markets. They tend to be the province of institutions and high net-worth individuals who are looking for ways to manage financial risk. However, many financial products purchased by private investors now use derivatives as a matter of course.

Derivatives can be either **exchange traded**, when they are bought or sold on a recognised exchange, or they can be **over-the-counter (OTC)**, when they are created and sold directly to customers by banks and other financial institutions. An OTC instrument is tailored to suit the requirements of the client, whereas an ETC has standardised terms and conditions. This makes them cheaper to enter into and easier to trade on an exchange.

Derivatives are generally traded on specialist exchanges such as the NYSE London International Financial Futures and Options Exchange (NYSE Liffe).

Using derivatives allows investors to take an exposure in relation to the underlying asset without actually requiring ownership of the asset. They allow investors to make profits on upward or downward movements in the underlying asset.

There are broadly two types of derivative that are traded on exchanges, futures and options.

O1 Futures

A future is an exchange-traded forward contract. It is a legally binding agreement to buy or sell an asset at a specified future date, at a price that is agreed when the contract is made. The contract imposes an open-ended obligation on both parties until expiry or closing-out.



Contract specifications

The exchange standardises the contract specifications in terms of the quality, quantity, delivery date and delivery price for each commodity and financial asset.

O1A Operation of a futures contract

For each futures contract there must be a buyer and a seller:

- **Buyers** of futures are said to have a long position. They have an obligation to purchase the

underlying asset sometime in the future for the price agreed when the contract was made. They hope prices will rise.

- **Sellers** of futures are described as having a short position. They have an obligation to deliver the underlying asset at some date in the future for the price agreed when the contract was made. They hope prices will fall.

Both parties to the contract, the counterparties, have to honour their obligations.

O1B Trading financial futures

An initial trade opens a client's position in the derivatives market. This may be either a purchase or a sale trade. Open positions are those in which rights or obligations to the market are ongoing.

The price agreed when the futures contract is opened is not paid or received in full, nor does the underlying asset change hands at that time. Instead, both the buyer and seller of the contract have to deposit an initial margin with an independent third party, as follows:

- NYSE Liffe uses the services of the London Clearing House (LCH), which stands between each counterparty of a futures contract to ensure that every contract is honoured.
- The initial margin acts as collateral which can be used, if needed, to fulfil either side of the contract, i.e. pay or deliver what has been promised.

As open positions could be maintained for long periods of time, they are re-valued on a daily basis through a process known as **marking to market**. This takes into account any movement in the price of the contract and closely mirrors changes in the price of the underlying asset. The profits and losses resulting from the daily price changes are known as variation margin, and these margins are paid and received on a daily basis.

The clearing house pays profits to one side of the contract and receives losses from the other.

At expiry of the contract, the client will already have been credited with the profit, or have paid the loss if the contract went against them.

If a client fails to pay their variation margin, the exchange will close all of the client's open positions immediately by buying equal but opposite contracts, charged to the client.



Positions

A position in a futures contract undergoes a daily revaluation until either:

- the contract reaches its expiry date, when it is either settled by physical delivery of the underlying asset or for cash, depending on the nature of the futures contract; or
- the investor decides to close out an open position by executing an equal and opposite trade.

At this point the initial margin is returned.

O1C Delivery

Where futures contracts are physically settled, e.g. bond or commodity futures, the short side (the seller) has to deliver to the long side (the buyer) the appropriate quantity of the underlying asset at the expiry of

the contract. In return, the long side will pay the short side the **Exchange Delivery Settlement Price (EDSP)**. This is the closing price of the futures contract at the time of delivery, which matches the cash market price of the underlying asset. After netting off the daily profits and losses that have been credited or paid through the system of variation margin, this will leave the long investor in profit if the market rose or in loss if it fell, and vice versa for the short investor.

Where a futures contract is settled in cash, the open positions are 'closed out' on the last day of trading at the EDSP.

Not all futures contracts can be settled by physical delivery of the underlying asset. Some, such as interest rate contracts or index contracts, are always settled in cash.

O2 Options

An option gives the buyer the right, but not the obligation, to buy or sell a specified asset at a fixed price before or on a certain date in the future. The fixed price is called the strike price or exercise price.



Call options and put options

The option can either be a call option or a put option:

- a **call option** gives the buyer of the option the right to buy the underlying asset; and
- a **put option** gives the buyer of the option the right to sell the underlying asset.

The seller of the option is obliged to meet the obligation placed upon them by the buyer:

- the seller of a call option must sell the underlying asset to the option holder; and
- the seller of a put option must purchase the underlying asset from the option holder.

O2A Paying for options

The buyer (or holder) of an option pays the premium, which is the cost of the option, plus an additional commission, but does not have to make any margin payments.

The seller (or writer) of the option receives the premium, but pays commission and also has to make margin payments. An initial margin is deposited with the LCH upon writing the option, and variation margin calls will be made on a daily basis.

O2B Choices open to option holders

The choices open to the holder of an option are to:

- exercise the option;
- sell the option before expiry; or
- let the option expire worthless.

Exercise the option

This is the process by which the option holder uses the right given by the option. The time by which exercise has to have taken place is called expiry.

- An option that can only be exercised at expiry is known as a European-style option.
- One that can be exercised at any time during its life is known as an American-style option.

The majority of UK options are American-style, although LIFFE offers European-style options on the FTSE 100 and a number of European indices.

Sell the option before expiry

With a traded option, the right to exercise the option can be bought and sold. Its value will rise and fall according to the movement in the underlying asset and the length of time the option has to run to expiry.

The value of an option has two components, **intrinsic value** and **time value**.

Intrinsic value:

- a call option will have intrinsic value if the current price of the underlying asset is above the option's strike price; and
- a put option will have intrinsic value if the current price of the underlying asset is below the option's strike price.



Intrinsic value

Options with intrinsic value are referred to as in-the-money; those without any intrinsic value are out-of-the-money. When the strike price equals the current price of the underlying asset the intrinsic value is zero, and the option is referred to as at-the-money. The premium that has been paid is ignored when determining whether an option is in-, out-, or at-the-money. The calculation compares just the current price against the exercise price.

Time value:

Before it expires, the market value of an option will generally exceed its intrinsic value by an amount called the option's time value. This is:

- the amount an investor is prepared to pay for an option, above its intrinsic value, in the hope that its value will increase before it expires because of a favourable change in the price of the underlying asset; and
- directly related to how much time an option has until expiry. It erodes throughout the option's life.

At-the-money and out-of-the-money options do not have any intrinsic value, because they do not have any real value. Their price reflects time value, which gradually decreases to zero as the option approaches expiry:

- The more time an option has until expiry, the greater the chance that it will end up in-the-money.
- At expiry, all an option is worth is its intrinsic value, it is either in the money or it is not.

Let the option expire worthless

If at expiry the market price of the underlying asset is below the strike price, i.e. the option is out-of-the-money, there is nothing to be gained by exercising the option. The holder can simply let it expire valueless, and will incur a loss equal to the premium paid to the option writer.

O3 Using futures and options

Futures and options can be used for a variety of purposes; the two major uses are hedging and speculation:

- the object of hedging is to protect an existing exposure against future adverse price movements; and
- the purpose of speculation is to try to profit by correctly forecasting future price movements, at the risk of making losses if the forecasts are wrong.

O3A Hedging a future purchase

A fund manager may expect to receive a large amount of cash in the next few months, which is to be invested across the FTSE 100 market. If the fund manager is concerned that the market is going to rise before the money is received, they have three choices:

- wait until the money is received and buy the securities at their higher prices;
- borrow sufficient funds to invest immediately, repaying this with interest when the cash is received;
or
- use derivatives.

Using futures

The fund manager can buy FTSE 100 futures:

- if the market rises, the profit on the futures contracts can be used to offset the increased cost of buying shares at their higher prices; and
- the risk for the fund manager is that if the market falls, there will be a loss on the futures contracts, although this will be offset by the reduced cost of purchasing the shares at their lower price.

Either way the fund manager will have locked into the FTSE 100 at the price prevailing when the futures contracts were purchased.

Using options

The fund manager can buy a FTSE 100 call option:

- if the market rises above the exercise price of the option, it can be exercised profitably, and the gain on the option will compensate for the increased cost of buying the shares; and
- if the market falls, since the holder has a right rather than an obligation, the fund manager could let the option expire.



Risk for the fund manager

The risk for the fund manager if the market falls is limited to the premium paid for the option, plus transaction costs.

O3B Hedging a portfolio

If a UK equity fund manager believes that there is going to be a sharp downturn in the market in the short term and wants to protect the value of the fund, they have two choices:

- **They could sell part of the portfolio.** However, many fund managers' mandates restrict them to a

small cash position, so that this strategy is not always possible. If the manager sells stocks now and the market fails to fall, they will have incurred significant dealing costs unnecessarily. It may also prove impractical to liquidate a large portfolio.

- **They could use derivatives.**

Using futures

The fund manager can sell FTSE 100 futures:

- if the market falls, the profit on the futures contracts can be used to offset the capital loss on the equity portfolio; and
- the risk for the fund manager is that if the market rises, there will be a loss on the futures contracts, which will offset the capital gain of the portfolio.

Either way the fund will remain static, i.e. it is hedged.

Using options

The fund manager can buy a FTSE 100 put option:

- if the market falls below the exercise price of the option, the gain on the option will compensate for the fall in the capital value of the portfolio; and
- if the market rises, the fund manager could let the option expire.

The risk for the fund manager is limited to the premium paid for the option, plus transaction costs.

O3C Asset allocation

Consider a fund manager who currently has a diversified UK portfolio divided between equities and fixed-interest securities in a ratio of 65:35, and who expects a short-term underperformance of equities in relation to fixed-interest securities. They may wish to change the asset allocation of the portfolio to 55:45. They have two choices:

- They could trade the underlying physical assets. This might take time and would incur costs. It would also need individual share analysis to decide which stocks should be sold, which the manager might not wish to undertake, particularly in a rush.
- They could sell FTSE 100 futures on 10% of the portfolio value and buy Long Gilt futures on an equivalent cash amount.



Benefits of using futures

Using futures offers significant benefits in terms of:

- lower dealing cost;
- speed of dealing; and
- liquidity, i.e. the ease of trading any volume at any time without drastically affecting market prices.

O3D Speculation

Consider a speculator who expects that soon to be released UK data will indicate the likelihood of

changing interest rates, which would lead to changes in bond yields and so to the prices at which they are bought and sold. They may trade Long Gilt futures in the expectation of making a profit, as follows:

- if the expectation was that interest rates would rise, so that bond prices would fall, they would sell Long Gilt futures; and
- if the expectation was that interest rates would fall, so that bond prices would rise, they would buy Long Gilt futures.



Consider this...

Speculators find futures an ideal tool if they want to take an aggressive position in an underlying index. It is both expensive and time consuming to buy the underlying securities, and futures allow them to gain an exposure quickly and for considerably less cash investment.

O3E Writing options

The risk for buyers of options, both calls and puts, is limited to the premium paid.

- The reward for buyers of a call is unlimited, the more the price rises above the exercise price the greater the reward; and
- the reward for buyers of a put is greatest if the price of the underlying asset falls to zero.

Sellers of options, called writers, face almost unlimited risks in return for the premium they receive, yet for every buyer of an option there has to be a willing seller. Most writers are major investment banks or specialised traders, but there are some circumstances when fund managers can make use of option writing, despite the apparent risks.

Writing a call

A fund manager may increase income to the fund by writing call options and receiving the option premium. In return, the manager has to accept the possibility that the option will be exercised if the share price rises sufficiently and the shares handed over at the agreed strike price.

Provided the fund owns the underlying stock, when the options are referred to as being ‘covered’, the risk is minimal. It may be that the fund manager has identified the exercise price as the level at which the shares would have been sold. Consequently, they have benefited from the premium income in addition to the potential selling price, but at the cost of foregoing any profits on selling at above that price.

The writer of a call option believes that the share price is likely to either stay the same or fall. If that happens, the writer simply pockets the premium received and will not have to deliver the shares.



Largest risks

The largest risks come from writing options over shares (or other assets) that the writer does not own. In these instances, the writer may have to buy the shares in the market if the option is exercised, possibly at a price well above the exercise price. This would lead to a real loss by the writer. This strategy is called writing uncovered calls.

Writing a put

A fund manager who writes a put option receives premium income, but in return enters into an obligation to purchase an asset at a fixed price.

The expectation is that the underlying asset price will not fall significantly. If it does, the writer of the put option will be exercised against, and will have to buy the asset at a price above the current market price. The worst case would arise if the price of the asset falls to zero. If this happens, the loss will be the exercise price less the premium received.



Consider this...

What the put writer hopes for is that the put option will not be exercised. This will occur if the asset has a price above the exercise price at expiry.

O4 Taxation of derivatives

Profits from both futures and options are usually chargeable to CGT. For individuals, there is no CGT, or allowable loss for gains or losses on futures, or options over gilts or qualifying corporate bonds.

Buying options:

- if a call option is exercised, the cost of the option is treated as part of the total cost of purchase;
- if a put option is exercised, the cost of the option is treated as an allowable deduction from the sale proceeds (the exercise price); and
- if the option is allowed to expire worthless, this is treated as a disposal for CGT purposes, giving a capital loss on the date of expiry.

Futures:

- when a futures position is closed, any money received is treated as consideration for the disposal of the futures contract, and any money paid is treated as an incidental cost of disposal; and
- if the futures contract is not closed out, each party is treated as having made a disposal of an asset:
 - any payment made or received is treated as consideration for, or an incidental cost of, the disposal.



Question 6.10

What are the two main uses of futures and options?

P Hedge funds

Hedge funds refer to funds that adopt non-traditional investment methods. They are pooled investments, where a number of investors entrust their money to a fund manager, who invests in various traded securities. Hedge fund managers will actively manage the investments as they seek to provide positive absolute returns, regardless of overall market movements.

They will use one or more alternative investment strategies, which can include:

- hedging against market downturns;
- investing in asset classes such as currencies or securities that are trading below their true value; and
- using return-enhancing tools such as gearing, derivatives and arbitrage.

The Hedge Fund Association recognises at least 14 distinct investment strategies adopted by its members,

each offering different degrees of risk and return. It reports that there are currently 10,000 active hedge funds.



Consider this...

Within the hedge fund industry there are many interpretations of strategy, with new themes emerging as the financial markets develop. Funds vary considerably in terms of the risks involved, their level of borrowing (gearing) and the investments purchased. Many, but by no means every hedge fund, use derivatives in their investment approach.

P1 Common features

For all of the variety, there are some common hedge fund features and these are discussed in the following sections.

P1A Investment objectives

Absolute return

Hedge funds generally do not adopt a 'long only' strategy, i.e. holding a portfolio of equities and/or bonds. The funds aim for an **absolute return** with limited volatility, rather than performance relative to an index benchmark. They seek higher risk-adjusted rates of return. Most hedge funds aim to limit downside volatility, e.g. via the use of options.

Limited correlation with equity and bond markets

The various investment methods of hedge funds mean that they frequently have limited or even negative correlation to the markets in which they operate. As a consequence, even when markets are falling, hedge funds can and do achieve positive returns, although the opposite can also be true.

P1B Investment instruments used

The development of the derivatives markets over the past 20 years has encouraged new hedge fund strategies. It made it easier for funds to adopt significant positions in various securities without the need to purchase the underlying asset.

Use of gearing to enhance portfolio returns

Some, but not all, hedge funds use gearing to provide a potential boost to investment returns, so this should be a key factor when assessing a fund.

P1C Structure of the investment vehicle

Offshore status or a US limited partnership structure

Hedge funds are usually structured as a collective investment scheme or a US limited partnership, and most have traditionally been established offshore to minimise set up, regulatory and administration costs. The majority of offshore funds operate from Bermuda and the Cayman Islands.

P1D Investment strategy

While there are no universally agreed definitions, there are four broad categories of hedge fund strategy. For example:

- **Long/short funds:** these funds invest in equity and/or bond instruments, and combine long investments with short sales of individual securities and derivatives to reduce market exposure. Long/short funds can operate with a bias towards either the long or short side or a balance between the two in a 'market neutral' approach. This is the most popular strategy of hedge funds.
- **Relative value funds:** these funds are often referred to as adopting 'market neutral' strategies because there is no market related element in their returns. Instead, the managers rely on arbitrage to produce returns, i.e. by identifying and exploiting pricing anomalies between similar investments or combinations of investments. Although these strategies usually have limited volatility, they can still suffer when market liquidity dries up.
- **Event-driven funds:** these hedge funds use the price movements arising from anticipated corporate events to achieve their returns. The approach tends to be uncorrelated with investment markets, but usually performs best in strong market conditions when there is greater corporate activity. As with relative value funds, event-driven funds generally fall into the lower volatility range of hedge funds.
- **Tactical trading funds:** these are hedge funds that most closely match the public perception of a hedge fund. In reality, they now represent a relatively small part of the hedge fund universe. They trade in currencies, bonds, equities and/or commodities. In each asset class they may use the same long/short approach as equity hedge funds.

P1E Funds of hedge funds

Funds of funds work on the basis that they spread risk. To this end many companies have created funds of hedge funds that allow investors to access a range of hedge fund investments, relying on the company to employ specialist research teams to perform the due diligence. In one respect this is similar to investing in UK equities by choosing a collective investment scheme; the manager's skills in assessing in which hedge funds to invest are paid for by the investor – in return for (hopefully) better performance than the investor could achieve doing it themselves.

P2 Risks in hedge funds

It is important to be aware of the differences that can exist between the various hedge funds, as their investment returns, volatility, and levels of risk can vary enormously, depending on the particular strategies that are used. Since the managers can use a variety of techniques to try to achieve their objectives, it may be difficult to establish the risks that are likely to be involved.

If the fund is highly geared, the risks can be magnified if things go wrong.

Hedge funds were traditionally limited to institutional and very wealthy individuals, but the availability of funds of hedge funds has opened the market to retail investors.

The disadvantage of a fund of funds is that they are expensive. The underlying fund may have an annual charge as high as 2% per year, with a typical performance bonus of 20%. On top of this, there may be a fee of up to 2% to the manager selecting the range of hedge funds.



Hedge funds may be appropriate for high net worth individuals with adventurous risk profiles (although a lot of investors are now pension funds and insurance companies) and could help to diversify their portfolio. However, they generally lack transparency and the risks involved in how they operate are difficult to assess.

Q Absolute return funds

Absolute return funds aim to achieve a positive absolute return for investors in all market conditions. They focus on the value created purely by the fund manager and measure their return against an absolute return objective such as cash, rather than relative to a market benchmark.

They achieve their results by adopting widely differing investment strategies. These can include investing in a wide range of assets, including not only shares, bonds and cash, but also commodities and private equity. They can also use derivatives, which allow the fund to make money when an asset is falling as well as when the price is rising. However, not all absolute return funds carry the same risk, some managers may be prepared to take more risk to produce a greater absolute return.



Performance of absolute return funds

Given their different strategies, it is to be expected that the performance of absolute return funds will vary over time and this emphasises the importance of taking a long-term approach.

R Structured products

Structured products are investment vehicles designed to offer tailored combinations of risk and return. Many structured products offer some form of capital protection to appeal to retail investors, whilst some offer absolute return profiles or geared growth with similar downside risks as an active fund.



Market for structured products

The market for structured products has developed substantially from the simple FTSE 100 growth products of the early 1990s, supported by an increase in the availability of derivatives both on exchanges and in the OTC market. However, the market growth of structured products was hit by the financial crisis, which brought home to investors and advisers risks that had previously received little attention.

R1 Characteristics of structured products

‘Structured products’ is a generic term used for a range of investment products marketed under a variety of names, such as ‘capital protected growth bonds’, ‘structured funds’ and ‘investment notes’.

The development of the derivative markets and, in particular, OTC derivatives, allowed more sophisticated products to be created with a wide range of underlying assets and a considerable variety of capital protection gearing and other features on offer.



Nature of a structured product

A structured product is actually not a product type in itself, but rather a wrapper designed to achieve a specific set of investment objectives with a specific risk/reward profile. It achieves this by offering a degree of participation in the return from a higher-performing, but riskier, underlying asset, often combined with an element of capital protection. For example, the same structured product may be offered as an ISA investment, a self-invested personal pension (SIPP) investment, a deposit or a direct investment.

The ‘structuring’ of the product could include offering participation in the return from virtually any underlying index or fund, such as the FTSE 100, S&P 500, Nikkei or Eurostoxx 50. In recent years, the range of underlying assets has extended to include commodities and even indices, which have been developed specifically for structured products. Alongside capital protection, there can be a variety of other features, the number of which continues to grow.

As a result, there is a wide variety of structured products currently available and sold in recent years. To understand how they are structured, however, we will look at a simplified example.



Example 6.15

A simple structured product might offer a five-year term, 100% protection and participation in the growth of the FTSE 100 index up to a specified limit.

The way this works is to combine two instruments within the wrapper of the structured product:

- a zero coupon bond; and
- a call option.

A zero coupon bond is a fixed-interest security that pays no coupon, but is instead sold at a discount to its par value and so can provide a known amount at its maturity. For example, for every £1,000 invested in the structured product only £825 might be invested in a zero coupon bond that will repay £1,000 at maturity in five years’ time. In this way, the zero coupon bond provides the capital guarantee element of the structured product.

The remaining money invested in the structured product – £175 – will be used partly to meet distribution and production costs, with the remainder used to buy an OTC five-year call option on the FTSE 100, capped at the specified limit. The call option will provide the return on the FTSE 100, but will exclude any dividends paid by the constituent companies.

If the index rises over the term of the structured product, the investor will receive the return on the call option plus the maturity proceeds of the zero coupon bond. If the index falls, however, the call option will be worthless, but the investor will receive the maturity proceeds on the zero coupon bond.

The structure of the product allows the investor to gain some exposure to the potential growth in the FTSE 100, and in return for surrendering any dividends from the underlying companies the investor is able to benefit from protection of the capital invested.

There are many variations on the simple example above, but some of the common characteristics of structured products are:

- There is usually a stated fixed-term, although this may be a maximum term. Five or six years are the most common terms, as these are acceptable for ISA investment. Often plans will have terms of marginally over a round number of years, e.g. 5.09 years, with five-year exposure to the chosen asset and the balance accounted for by the offer period.
- In many cases, early withdrawals are not permitted.
- There is either a return of capital or income (rarely both), but not necessarily a 100% return of capital in all cases.
- The FCA view is that structured products can offer guarantees (as opposed to capital protection) if they are deposits or life policies. In theory, other structured products can use independent third parties to provide guarantees, but in practice this does not happen.
- The low fixed-interest yields currently available mean that providers are using a variety of mechanisms to make products both marketable and financially viable. These tweaks include caps on growth, kick-out clauses (see below) and capital protection, which is lost if a barrier (typically a 40%–50% fall) is crossed.
- Minimum or maximum returns are pre-specified.
- Increasingly there are ‘kick-out’ (also called ‘auto-call’) features, which result in a product maturing

early if a performance threshold is reached. For example, a plan may automatically mature on any anniversary with a fixed payment if the underlying index is not below the starting level.

- Returns for retail products are usually based on the performance of an index such as the FTSE 100. In practice, the FTSE is the dominant index, usually accounting for the majority of retail products on offer.
- The lack of an established secondary market means that investors are unable to trade the products in the interim unless they are the kind of structured product that is listed on the stock exchange or are a UCITS fund.

R2 Types and methods of investing

The range of structured products available is wide and growing, as product providers design new structures to meet changing market conditions.

Whilst the type of structured product will change from provider to provider and from time to time, they will generally fall into one of three main structures:

Structure type	Features
100% capital protection	The investor receives the return on the underlying index or a specified fixed return provided the index has risen, and if it has not risen they receive 100% return of the capital invested.
Partial capital protection	A set return or income level is offered, but capital protection is only provided so long as the underlying index does not decline below a set amount. For example, the capital protection might apply provided that the FTSE 100 does not fall below 40% of its value at the start of the period. This is known as 'soft protection' or 'contingent capital protection'. The FCA classes such products as structured capital-at-risk products (SCARPs).
No protection	A few structured products provide no capital protection at all and instead offer exposure to 100% of the movement in the underlying asset or index or a greater leveraged return. These also count as SCARPs.

Structured products are available from a range of providers including banks, fund management groups and specialist companies. The pool of providers has contracted somewhat in recent years with some specialists – notably Keydata – being forced to close.

There is also a range of structured products available that, once issued, are listed on the London Stock Exchange. These are referred to as **investment notes** and offer the investor the opportunity to sell their note and take profits early, if the markets rise before the maturity of the note. These are typically provided by investment banks and are usually more complex than retail packaged products. The underlying investment choice is also much wider – some products relate to shares in single companies.

R3 Returns

The returns from structured products will vary depending upon their terms and on the performance of the

underlying index or asset.



Consider this...

One of the attractions of structured products is that the client should know at the outset how much they can gain or lose, which is quite different to making direct investments in equities or other assets. That being said, there are products which offer contingent capital protection, or barriers, which do introduce further uncertainty into the structured product market.

Some of the **benefits of structured products** include the following:

- A wide range of underlying asset combinations is available, from single indices or funds to mixes of assets for more complex investment strategies.
- There is no exposure to a particular manager's style or ability, unless the product is linked to a fund or portfolio of funds.
- The degree of upside participation will be explicitly stated.
- A level of capital protection is generally included.
- The risk and return characteristics are fixed and transparent – although a clear understanding of this can require detailed consideration.

The **potential drawbacks of structured products** include:

- Caps on participation rates will limit the returns investors could have made in a strongly rising market.
- Kick out features can mean a product matures early and the investor misses out on future growth.
- Averaging of index measurements may dilute returns in rising markets.
- If the product cannot be sold in the secondary market, maturity could take place during a market fall, meaning that any profits that might have been made will either be reduced or disappear.
- Most retail products are for fixed terms and early encashment (other than as a result of a kick-out) may be impossible or costly. This means that they are not suitable to hold funds that might be needed at short notice.
- Falls in equity and other markets could be significant enough for the product to lose its capital protection. Once lost, it cannot be regained.

Selection of a suitable structured product needs to be based on the investor's aims, attitude towards risk and ability to accept loss to identify a product that provides an appropriate mix of capital protection, with the possibility of higher returns from more volatile investment vehicles. The underlying asset of the structured product should also be considered in terms of portfolio balance.

R4 Risks

It is important that investors and their financial advisers considering structured products thoroughly understand the risks and characteristics of any structured product before investment. The failure of Lehman Brothers in 2008, and the subsequent effect this had on products where Lehman was a counterparty, has underlined the importance of considering all risks. Upon examining structured products, investors and their financial advisers should ascertain the following:

Return	<ul style="list-style-type: none">• precise details of how the return will be calculated – many products apply smoothing to index numbers or use intra-day values;
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	<ul style="list-style-type: none"> • what factors might change the initial estimates; • the extent to which the investor will capture any upward movement in the markets; • the value of giving up the dividend flow so that the cost of the protection can be judged.
Risk profile	<ul style="list-style-type: none"> • assets forming the structure of the product; • risks to the original capital invested; • the extent of any capital protection; • provisions relating to limited protection; • the extent of protection under the Financial Services Compensation Scheme (FSCS) or other EU schemes – UK deposit-based structured products will usually be covered up to £85,000 per investor.
Costs	<ul style="list-style-type: none"> • costs and fees associated with buying, holding and selling the structured product; • tax implications for the investor.
Encashment	<ul style="list-style-type: none"> • any early encashment penalties; • the transparency of pricing if the product can be sold on the stock market or otherwise encashed; • liquidity in the secondary market; • costs associated with any stock market sale.
Credit risk	<ul style="list-style-type: none"> • creditworthiness of the issuer; • creditworthiness of any counterparties involved in the underlying derivatives; • credit rating of any zero coupon bond or other instrument; • extent to which counterparty risk is protected by collateral – some counterparties over-collateralise with gilts, but the added protection reduces potential returns.



Consider this...

The Lehman Brothers Minibond scandal refers to events related to the company's bankruptcy in 2008, and the unravelling of structured products known as Minibonds. Minibonds paid interest until they matured, at which point the investor was entitled to a redemption payment. The interest on offer was much higher than the deposit rates on offer at the time, so consequently they were very popular with investors, who had little interest or comprehension of the risk factors contained in the small print. Lehman Brothers had arranged nine series of Minibonds and was also the swap counterparty, which meant that when it went bankrupt it defaulted on the interest payments. This then led to some early redemptions and liquidation of the underlying assets which, because of the global credit crisis, had fallen dramatically.

The products were sold as low risk to investors who were unlikely to understand the many risks they were in fact exposed to.

It is vital that a realistic assessment is made of the risks associated with any structured product. Advisers must have a full understanding of these so they can communicate them clearly and ensure the client has a firm understanding of the potential risks and rewards.

R5 Summary

Structured products can have a valuable role to play in financial planning. Investors whose priority is capital protection can find solutions from amongst the wide range of products on offer. For instance:

- Investors who are cautious about stock market investments (after seeing the financial turmoil of recent years) but who want to share in the potential upside that exposure to markets can offer, can consider products that offer combinations of market participation and capital protection.

- For the more adventurous, there are products that offer exposure to commodities, hedge funds and foreign exchange markets as their underlying assets and others that offer a mix of different asset classes, indices or baskets of individual equities. Structured products can offer access to asset classes that would not usually be available through traditional investment funds and offer the potential for diversification within an overall investment strategy.

**Question 6.11**

When investors consider using structured products, what areas in particular should they find out about?

**Question 6.12**

What are investment notes?

S Sharia-compliant investments

The demand for Islamic banking and investment products is growing and increasingly being provided by financial institutions.

Under Sharia law, Muslims are restricted from investing in certain investments. The two most important effects of Sharia law on Islamic finance are the restrictions on paying interest (Riba) and making unlawful investments in areas, such as gambling, alcohol, pork products, tobacco and other areas that are against Muslim values.

To be Sharia-compliant, a fund's strategy for investment must be compatible with the principles and all Sharia-compliant investments must be certified by Sharia experts usually through a panel or board.

S1 Sharia-compliant funds

There are three common types of Sharia-compliant funds: equity funds, commodity funds and Ijarah funds.

S1A Equity funds

Returns are generated mostly through capital gains although dividends are permissible if these are from companies that have been approved by a Sharia Board.

S1B Commodity funds

These buy Halal commodities at a fixed price to re-sell for profit. Compliant funds cannot be involved in commodity futures as this is deemed gambling.

S1C Ijarah funds

Ijarah funds hold tangible assets such as property so the main source of income for investors is from rent. A 'sukuk' is issued to the subscriber, which is a Sharia-compliant bond with similar characteristics to a conventional bond except they are asset-backed. A sukuk represents proportionate beneficial ownership

in the asset.

S2 Sharia-compliant bank accounts

These accounts provide the same banking services as other current accounts. However, they don't provide a return on the deposit or offer overdrafts because the principle of paying or charging interest is against the law of Islam. Any money invested is kept separate from other accounts and it won't be used to generate interest or be invested in businesses that are prohibited.

With a Sharia-compliant savings account the bank uses the money in a way that is consistent with Islamic beliefs instead of lending it and charging interest which is then passed to the client. The bank will follow the advice of a panel to ensure that the profit-generating activities are Sharia-compliant. Some of the profit earned is then returned to the client allowing them to grow their money without earning interest.

Cash put into UK banks or building societies authorised by the Prudential Regulation Authority (PRA) is protected by the FSCS – the savings protection limit is £85,000 or £170,000 for joint accounts per authorised firm.

T Direct investment compared to indirect investment

Finally, we will consider the advantages and disadvantages of direct investment in securities and assets compared to indirect investment through collectives and other products.

T1 Advantages and disadvantages of direct investment

The **main advantages of directly holding equities and fixed-interest securities**, rather than through a collective investment like a unit trust or life assurance policy, are as follows:

- Many clients are interested in having direct holdings in specific companies, whose fortunes they enjoy following.
- Optimal portfolio diversification is only achieved after adding about the 20th stock. In Edwin J. Elton and Martin J. Gruber's book *Modern Portfolio Theory and Investment Analysis*, they conclude that the average standard deviation (risk) of a portfolio of one stock was 49.2%, while increasing the number of stocks in the average well-balanced portfolio could reduce the portfolio's standard deviation to a maximum of 19.2% (this number represents market risk). However, they also found that with a portfolio of 20 stocks the risk was reduced to about 20%. Therefore, the additional stocks from 20 to 1,000 only reduced the portfolio's risk by about 0.8%, while the first 20 stocks reduced the portfolio's risk by 29.2% (49.2% to 20%).
- They are likely to interest investors who have a reasonable attitude to risk, because unless the portfolio is large, it is likely to have greater volatility of performance.
- There are low costs on switching investment managers, because a transfer of stocks can be arranged without having to sell and repurchase the investments.
- The portfolio can be tailored to the investor's particular requirements and the manager can also add value via asset allocation in multi-asset class portfolios.
- It is easier to exclude holdings in specific stocks for ethical or any other reasons.

- There is greater transparency of all costs.
- Gains are subject to CGT, but this may be limited or avoided by the annual exempt amount.
- Larger portfolios can enjoy an economy of scale and lower ongoing charges figures (OCF) than can be achieved through collective investments, where each unit carries an identical cost.

Disadvantages of direct investment

Direct investments, however, do have their drawbacks:

- There may be higher volatility of performance, because fewer investments will be held than within a collective investment.
- For smaller portfolios, the costs may be higher.
- It generally requires greater involvement by an investment manager, particularly for an advisory client.
- The results may be more variable, because they depend largely on individual managers, and the performance of one or two stocks could have a disproportionate effect on the overall portfolio.
- In larger portfolios, CGT may be payable on gains realised within the directly invested portfolio. It may be necessary to switch individual investments more frequently than collective investments, thereby possibly incurring a CGT charge.
- There may be more administration than with collective investments, although this will usually be minimised by the use of nominee and other services such as dividend collection.
- Value added tax (VAT) will be charged on management fees, which are not tax relieved in any way.

T2 Collective investments

The alternative to direct investment is to use a **collective**. In this subsection, we will look at the advantages and disadvantages of the most popular collective investments: unit trusts, OEICs and investment trusts. These all allow the individual investor to participate in a large portfolio of shares with many other investors.

T2A Advantages of unit trust/OEIC investment management services

Holding a portfolio of unit trusts and/or OEICs that are actively managed by an investment manager is advantageous in several ways:

- A wide variety of unit trusts and OEICs is available. This includes institutional and overseas funds, which should meet the particular needs and risk profiles of most investors.
- A spread of risk (including overseas investment) can be achieved, even for smaller portfolios.
- Further diversification can be obtained through a managed portfolio of unit trusts and OEICs with different fund managers who have a variety of investment styles and objectives. (For example, stock picking, top-down, recovery, blue-chip).
- Specialised unit trusts and OEICs can give exposure to particular markets or sectors that might prove difficult or expensive for a directly invested portfolio.
- CGT is not payable on gains realised within the trust or OEIC.
- VAT is not payable on the annual charges levied within the funds.
- There is no stamp duty reserve tax (SDRT).

T2B Disadvantages of unit trust/OEIC investment management services

There are several drawbacks to investing through portfolios of unit trusts and OEICs:

- Further management fees are payable in addition to the initial and AMC levied by the fund management groups. However:
 - most brokers buy units at creation price or creation plus 0.25%;
 - there are some low-charging unit trusts and OEICs, e.g. some index tracker funds.
- Changes to the portfolio of funds may be relatively expensive. This is because of the selling-to-buying price spread that most unit trusts operate and the initial charge levied on most OEICs.
- There is generally little direct involvement by investors.
- Changing investment managers may involve higher costs.

T2C Investment trusts vs. unit trusts and OEICs

Unit trusts, OEICs and investment trusts have much in common, but there are certain differences that give each of them advantages and drawbacks. These are outlined below:

- The costs of purchasing shares in investment trusts are often lower than investing in unit trusts. For example:
 - There may be a charge for disposing of investment trust shares, which is not usually the case with a unit trust or OEIC. Stamp duty is paid on investment trust share purchases at the rate of 0.5%.
 - The AMC of older investment trusts are generally considerably lower than those of most unit trusts and OEICs; but with some modern investment trusts, the total annual charges can be similar.
 - On balance, it is cheaper to invest in most investment trusts rather than most unit trusts and OEICs, although each investment trust should be looked at individually.
- The risk (and reward) of investing in investment trusts is often said to be greater than the risk (and reward) of investing in unit trusts. There are several reasons for this:
 - Investment trusts usually trade at a discount to NAV. The risk is that the discount might get wider. However, if the discount narrows, the shares may outperform the trust's assets. In the case of unit trusts and OEICs, however, the price of units cannot rise or fall any further than the rise or fall in value of the underlying investments.
 - Discounts can widen if the market does not like the way an investment trust is being managed and there are more investors trying to sell than buy. However, shareholder pressures may produce an improvement in performance or even a change of manager. Investors in unit trusts and OEICs have no power to bring such changes about.
 - Investment trusts can borrow to invest. Unit trusts and OEICs have much tighter restrictions on their borrowing powers, unless they are UCITS funds, which have considerably more flexibility. In certain cases, borrowing can increase the volatility and risk profile of an investment trust. At other times, it can reduce the risk if the managers use borrowings to finance the hedging of their positions, either in the market generally, in particular securities or in currencies.
- Investment trusts can provide higher levels of income than the equivalent unit trust or OEIC if there is a discount to NAV. The same amount of money buys exposure to more securities within an investment trust with a discount to NAV, and, as a consequence, a greater annual income.

- There are several different types of investment trust securities that have specialist uses, such as shares in split capital trusts and warrants. For instance:
 - Split capital shares divide out the investment returns from the trust to different classes of shareholders. The shares also involve different degrees of risk, from lower risk zeros to higher risk capital shares.
 - All investors in a unit trust or OEIC, on the other hand, have an equal entitlement to any income and capital gains, and bear the same amount of risk.
 - There are some types of unit trusts and OEICs that do not exist in investment trust form.
- Investment trusts are closed-ended public limited companies and unit trusts and OEICs are open-ended funds.



Question 6.13

If a fund is a UCITS fund what is the implication in terms of investment of the fund's assets?



Key points

The main ideas covered by this chapter can be summarised as follows:

Life assurance based investments

- There are many forms of life assurance and packaged investments on the market. Some offer growth potential, others can provide an income, while others can provide a combination of the two to suit an individual's situation.
- The tax benefits of many life products apply to relatively few individuals. For many investors who are willing to accept equity-based investments there are often more appropriate investment vehicles, such as ISAs.
- However, the variety of products available means that investors can enjoy additional benefits, such as guaranteed income vehicles, relative security in with-profit funds and children's saving products in tailor-made plans.
- For higher-rate taxpayers HMRC taxation rules for qualifying policies can benefit their tax situation by giving tax-free benefits after ten years. However, this benefit has been reduced, with the cap on contributions now at £3,600 per year. There are also other investments that can provide investors with a tax-efficient form of income.

Exchange traded products

- ETFs can be bought and sold like other shares listed on a stock exchange and provide instant exposure to an entire index through a single security.
- They combine the flexibility of a share with the diversification of a fund.
- ETCs work on the same principle, tracking the performance of the underlying commodity or basket of commodities either directly or by tracking an index designed to measure the value of that commodity.

Property based investments

- An alternative to direct property investment is to invest directly through shares in listed property companies; property unit trusts and

investment trusts; insurance company property funds and REITs.

- Pooled investment funds such as REITs are a convenient way of investing in property for an investor with limited funds.

Private equity

- EISs, SEISs and VCTs encourage investment in small unquoted companies by providing a range of tax reliefs if certain criteria are met. However, tax relief should not be the main motivation in choosing investments.

Individual savings accounts (ISAs)

- **ISAs**
 - ISAs allow investors to hold equities and bonds in a more tax-efficient way than owning them directly.
 - Investors can invest in: cash ISAs, stocks and shares ISAs, innovative finance ISAs and Lifetime ISAs.
 - Maximum contribution for 2017/18 is £20,000.
 - ISA investments are free of any UK income tax and CGT.
 - Transfers can only take place between ISA managers.
- - **Junior ISAs (JISAs)**
 - These were introduced in 2011.
 - All UK-resident children (aged under 18) who do not have a CTF are eligible.
 - There is an annual subscription of £4,128.
- **Child trust funds (CTFs)**
 - Children born on or after 1 September 2002 may have a CTF.
 - The Government provided an initial voucher for £250 (doubled for low income families). Contributions can be made by family and friends until the child's 18th birthday.
 - The Government stopped issuing new CTF vouchers from 1 January 2011 and introduced the JISA in November 2011. Since April 2015 CTFs can be transferred to JISAs.

National savings and investments (NS&I) products

- NS&I offer a wide range of products with both variable and fixed rates of interest, some of which are tax-free.
- Keep up-to-date with the range of products at www.nsandi.com

Purchased life annuities (PLAs)

- An annuity is a contract to pay a given amount each year to an annuitant whilst they are alive.
- PLAs are split into two elements: the capital element and the income element.
- The capital element is tax free as this is deemed to be a part return of the original capital. The income element is taxed as savings income.

Derivatives

- Derivatives can be used to manage risk by hedging, or to increase risk through speculation.

- The purchase of an option results in rights over an underlying asset; the purchase of a future results in an obligation.
- They can be either exchanged traded or OTC.

Hedge funds

- Hedge funds are pooled investments whereby a number of investors entrust their money to a fund manager who invests in various traded securities.
- The fund managers will actively manage the investments seeking to provide positive absolute returns, regardless of overall market movements.
- Funds of hedge funds have opened the market to retail investors and are intended to spread the risk over several funds.

Absolute return funds

- These aim to achieve a positive absolute return for investors in all market conditions by adopting widely different investment strategies.
- Success of the strategy is heavily dependent on the skill of the fund manager.

Structured products

- These are investment vehicles designed to offer tailored combinations of risk and return.
- Many offer some form of capital protection to appeal to retail investors.
- Structured products is a generic name for a range of investments marketed under names such as ‘capital protected growth bond’ or ‘structured funds’.

Sharia-compliant investments

- Under Sharia law, Muslims are restricted from investing in certain investments, in particular restrictions on paying interest (Riba) and making investments that are against Muslim values, such as gambling, alcohol, pork products and tobacco.
- To be Sharia-compliant, a fund’s strategy for investment must be compatible with the principles and all Sharia compliant investments must be certified by Sharia experts usually through a panel or board.
- There are three types of Sharia-compliant funds: equity funds, commodity funds and ijarah funds – the latter being funds that hold tangible assets such as property, so the main income for investors is rent.

Direct investment compared to indirect investment

- The alternative to direct investment is to use a collective. This is where investors participate in a large portfolio of securities or other assets with many other investors.



Question answers

6.7 Four from:

- They are investments that provide investors who are relatively risk-averse with some exposure to the equity market.
- Bonuses are not directly linked to investment performance as it is possible for life offices to use their reserves to produce a cushioning effect. This smooths out sharp rises and falls.
- Over the past ten years, with-profit policies have outstripped inflation.
- They allow investors to participate in the profits of the insurance company's trading activities.
- Ownership of a mutual life office's with-profit policies represents ownership rights in the life office itself, generating additional profits or shares if the company is demutualised.

6.8 Both are listed companies run by fund managers who are generally members of larger investment groups.

Investments in both can be made by subscribing for new shares when a trust is launched or by purchasing shares from other investors once the trust is established.

6.9 Four from:

- Shares that are officially listed on a recognised stock exchange or AIM. Shares in unquoted companies do not qualify.
- Small- and medium-sized enterprise securities (not just equities) admitted to trading on a recognised stock exchange.
- Corporate bonds that are officially listed on a recognised stock exchange, Qualifying securities include any loan stock or similar security of a company, whether secured or unsecured.
- Listed bonds issued by a cooperative and community benefit society.
- Gilts and similar securities issued by governments of EEA countries and 'strips' of all these securities, which have at least five years to maturity when purchased by the ISA manager.
- UK-authorized unit trusts and OEICs, which invest in shares and securities or warrants or are structured as fund of funds schemes which invest in them.
- Money market funds, futures and options funds, geared futures and options funds, and feeder funds are specifically excluded.
- Units or shares in a non-UCITS retail scheme, provided they do not restrict the savers' ability to access their funds by more than two weeks (limited redemption funds).
- UK-listed investment trusts.
- Units or shares in an FCA-recognised UCITS scheme.
- Shares acquired within the previous 90 days from an all employee savings-related share option scheme, an approved profit-sharing scheme or a share incentive plan. This applies even where the shares would not otherwise be qualifying investments (e.g. because they are not listed on a recognised stock exchange).
- REITs.
- Medium-term stakeholder products and life assurance products.

6.10 Hedging and speculation.

6.11 Return; risk profile; costs; encashment; credit risk.

6.12 Investment notes are structured products that, once issued, are listed on the London Stock Exchange. These offer the investor the opportunity to sell their note and take profits early if the markets rise before maturity.

6.13 If a fund is a UCITS fund this means that the fund manager has a lot more flexibility on how the funds are managed. This includes the ability to leverage, sell short and use derivatives.



Self-test questions

13.	Explain briefly what you understand by the term market value reduction (MVR).
14.	Which bonds separate income and capital so that the income paid reflects the income generated by the fund, leaving the capital intact? For which type of investor are they a suitable investment?
15.	State the various with-profit savings plans which are currently in force.
16.	What are the main types of life assurance policies for the investment of lump sums?
17.	What are the chargeable events for non-qualifying policies?
18.	What is the aim of a REIT?
19.	Describe the tax position of an investor receiving income from a REIT.
20.	Explain how CGT re-investment relief operates for an EIS.
21.	Who is eligible for a Junior ISA?
22.	What happens to a Junior ISA when the child reaches age 18?
23.	If a UK equity fund manager believes that there is going to be a sharp downturn in the market in the short term and wants to protect the value of her fund, apart from selling part of the portfolio what else can she do?
24.	What are the four broad categories of hedge fund strategy?
25.	Give three drawbacks of investing directly in securities.

You will find the answers at the back of the book

Appendix 6.3: Treatment of a single £10,000 bond vs. a cluster of twenty £500 segments

Unit growth rate of 5% assumed

1. In year three the investor wishes to withdraw £2,200.

The investment has now grown to £11,000 (20 segments @ £550).

One policy

	£
Partial withdrawal	2,200
Cumulative allowance	
(5% × 10,000 × 3) – includes the current year	<u>1,500</u>
Chargeable gain (excess over the 5% allowance)	700
Top-slicing – includes the current year	÷ 3
Top-sliced gain	233

Twenty segments

	£
Amount encashed (4 segments)	2,200
Original investment (4 × 500)	<u>2,000</u>
Chargeable gain	200
Top-slicing – complete years since start of policy	÷ 2
Top-sliced gain	100

The maximum tax liability is therefore reduced from £140.00 (£700 × 20%) to £40.00 (£200 × 20%).

2. In year six the investor wishes to draw a further £2,548. The investment is now worth £10,192 (16 segments @ £637).

One policy	£
Partial withdrawal	2,548
Cumulative allowance	
(5% × 10,000 × 3) – since last chargeable event	<u>1,500</u>
Chargeable gain (excess over the 5% allowance)	1,048
Top-slicing – includes the current year	÷ 3
Top-sliced gain	349

Twenty segments (16 left)	£
Encashment (4 segments)	2,548
Original investment (4 × 500)	<u>2,000</u>
Chargeable gain	548
Top-slicing – complete years since start of policy	÷ 5
Top-sliced gain	109

The maximum tax liability has been reduced from £209.60 (£1,048 × 20%) to £109.60 (£548 × 20%). In addition, the possibility of the higher rate being attained has been reduced by the greater top-slicing relief.

3. Final encashment in year nine. The investment is now worth £8,844 (12 segments @ £737)

One policy	£
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Final encashment	8,844
Plus all previous withdrawals	<u>4,748</u>
	13,592
Less original investment	<u>10,000</u>
	3,592
Less previous chargeable gains (excess over the 5% allowance)	1,748
Chargeable gain at maturity	1,844
Top-slicing – complete years since start of policy	÷ 8
Top-sliced gain	230
Twenty segments (12 left)	£
Encashment	8,844
Original investment (12 × 500)	<u>6,000</u>
Chargeable gain	2,844
Top-slicing – complete years since start of policy	÷ 8
Top-sliced gain	355

7 The investment advice process

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B Risk and return objectives	7.1
C Applying asset allocation	7.2
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Learning objectives

After studying this chapter, you should be able to:

- explain the investment advice process;
- understand the ‘know your client’ requirements;
- outline the importance of the client and adviser relationship;
- determine the aims and objectives of clients;
- describe risk and return objectives;
- explain the influence of time horizon and liquidity on risk tolerance;
- discuss the factors that can influence an investor’s tolerance of risk;
- explain the main constraints that can impact on the choice of investments; and
- state how asset allocation is applied to generate portfolios.

Introduction

In this chapter we will examine the investment advice process, the ‘know your client’ requirements, consider the relationship between the client and adviser, and examine the aims and objectives of clients. This involves considering the factors that influence investors’ tolerance of risk, and identifying the main constraints that impact on the choice of investments. Finally, we’ll look at the way in which asset allocation is applied to generate portfolios.



Key terms

This chapter features explanations of the following:

Accumulation and decumulation	Asset allocation	Attitude to risk	Capacity for loss
Client objectives	Constraints	Diversification	Ethical issues
Fact-find	Investment strategy	Monitoring	Platforms
Rebalancing	Risk and time horizon	Sharia investments	Socially responsible investing (SRI)
Strategic asset allocation	Tactical asset allocation	Tax wrapper	Time horizon

A Providing investment advice

Providing investment advice is an art rather than a science, despite much of the data being numerical. It involves balancing the emotional and financial needs of the client against the expected, but rarely certain, performance of the available investments. Uncertainties relating to clients’ circumstances (job, marital status, health, etc.) and uncertainties in the financial world, means that giving investment advice can never be a purely mechanical or mathematical process.

A1 The investment advice process

Providing professional investment advice to consistent standards requires the adviser to adopt and adhere to a clearly defined and structured process.



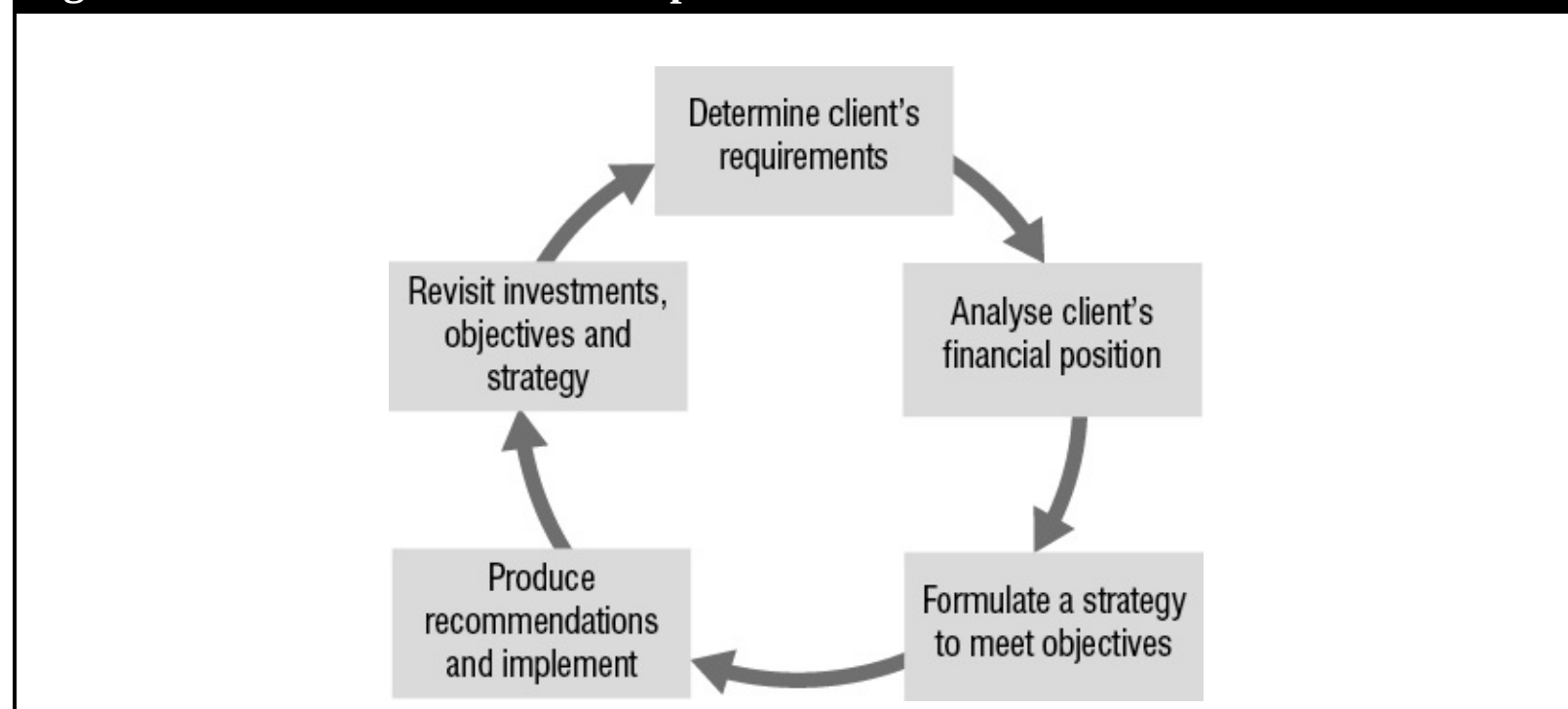
Important advantages of using a structured process

The important advantages of using a structured process are that it provides a discipline for advisers as well as an administrative template for a sequence of actions and that it can be documented so there’s a clear compliance trail.

Whilst an adviser needs to have a thorough knowledge of the various investment products available in the marketplace, and of the tax issues affecting investment, this technical knowledge is only beneficial to the client if it is applied in the right context to the relevant information, and communicated effectively. It is through engaging the client in the process and ensuring the client fully understands the implications of major decisions that optimal results will be achieved.

The high level investment advice process is shown in Figure 7.1.

Figure 7.1: The investment advice process



The process can be broken down further to include:

- establishing and defining the relationship between the client and the adviser;
- gathering client data, determining goals, expectations and any ethical issues;
- analysing and evaluating the client's financial status;
- creating a risk profile in agreement with the client;
- formulating the investment strategy for asset allocation;
- selecting investments, funds and products;
- selecting wrappers for tax efficiency;
- presenting and implementing the recommendations; and
- monitoring the portfolio and making any necessary adjustments; rebalancing the portfolio, switching out of underperforming funds.

The Conduct of Business Sourcebook from the Financial Conduct Authority (FCA) states that firms must take reasonable steps to make sure any recommendations provided to clients are suitable. To do so, they must obtain the necessary information regarding a client's:

- knowledge and experience;
- financial situation; and
- investment objectives.

The overall objective is to identify – and obtain the client’s agreement to – a portfolio designed to meet their key requirements as closely as possible. It is also important to explain and obtain their agreement to any critical trade-offs made in the portfolio’s construction. In many respects it is an educational process: helping clients to understand such concepts as risk, real returns (i.e. post-inflation) and nominal returns (which take no account of inflation) and the effects of business cycles on the markets.

A1A Establishing the client relationship

At the start of a client relationship an adviser should inform the client about the scope of the services on offer and any costs for the adviser’s work. This will typically be provided in the **client agreement**, which, among other things, sets out:

- remuneration;
- service that will be provided and the timescale in which it will be provided, e.g. quarterly or six-monthly valuations;
- duration of the agreement; and
- frequency of contact, e.g. not less than annual meetings.



Be aware

The main purpose of a client agreement is to ensure that the client has a clear understanding about issues, such as:

- the amount of reporting on investments;
- the frequency of reviewing the client’s circumstances and plans; and
- whether or not the adviser will alert the client to any changes to their planning that might be needed in the future.

A1B Gathering client data

The circumstances of every individual are unique and it is essential that an adviser considers which investment strategy is appropriate to meet a client’s varying needs before making any recommendations.



How it works

An adviser must be able to fully explain to the client, in a way that the client will understand, how each recommendation meets the identified financial goals and objectives. If a recommendation requires the use of a particular product, then any options need to be fully described and the relative advantages and disadvantages of any alternatives pointed out.

It is important that an adviser understands the true needs of the client and obtains enough information to ensure that any recommendations made are suitable and relate to the client’s aims, objectives and circumstances.

See [section A1G](#) for more information on ethical issues

Fact-finding extends beyond ‘hard’ information such as age and income to include ‘soft’ facts such as ethical and family values and attitudes to risk. It can be a long and delicate process, which involves not only listening to what clients want, but also includes helping them to identify:

- their true investment aims and what they want to achieve;
- the level of risk that they are comfortable with;
- how much they wish to save regularly or invest and for how long the money is to be invested; and
- other issues – such as ethical or socially responsible investing or restricting investments on the basis

of religious beliefs.

An adviser will need to gain a client's trust so that the client will feel confident about expressing their personal needs and concerns, and provide true facts about their financial position, including their current income, expenditure, assets and liabilities. This will provide the adviser with a full and clear understanding of a client's financial and personal situation. Several meetings, as well as telephone conversations and correspondence, may be needed to gather all the information the adviser needs. Once this process has been completed, the adviser should have a sufficient understanding of the client's financial position and investment objectives to undertake analysis and cash flow projections.

The key areas in which information is required are:

- needs and objectives;
- assets and liabilities;
- income and expenditure;
- priorities; and
- attitude to risk.

Often, the initial 'fact-find' will be through the client's completion of an online questionnaire. The adviser will need to review the answers given in the questionnaire, and then ask supplementary questions to fully appreciate the client's needs, which most people are unable to articulate with total clarity.



Most important outcome of the fact-finding process

The most important outcome of the fact-finding process is a clear understanding of the client's goals and their expectations. It is therefore advisable to secure their agreement to a formulation of these before moving onto the analysis stage.



Example 7.1

Goals and needs

Alex, aged 41, married with two young children, has expressed his goals as buying a bigger house, building up a fund of at least £10,000 for each child when they reach 21 and for him to retire when he is 60. The adviser lists his needs in priority order as:

- increasing contributions to retirement plans;
- increasing contributions to a cash deposit account for house purchase; and
- contributing to stock market-linked savings plans for each of his children.

A1C Analysing the situation

Clients often have desires or 'wants' that may be unrealistic both in terms of timescale and cumulative cost. The adviser's role is to identify the client's main needs, prioritise them and establish if these are achievable with the resources available. In the investment process, needs can be matched to sums of cash (income or capital) required at certain dates in the future. Explaining this to the client and demonstrating the investment returns required to meet these needs will often enable clients to engage with setting these priorities. If the adviser's view is that the goals are not achievable, then further negotiation with the client over the timescale and outcomes will be required.

Judging the achievability of the client's objectives will require cash flow projections and assessment of future requirements for income and capital, usually in more precise terms than the client has previously undertaken. The conversion of the client's goals, especially for retirement income, into capital sums will often show that they cannot afford to contribute enough to generate those sums unless very high rates of

return are achieved. This can provide the opportunity to discuss some key concepts with clients, in particular the effect of compounding and the importance of considering real returns rather than nominal returns.

In other words, it is necessary to start with a client's 'hoped for' target return and then temper this by applying their attitude to risk to obtain a more balanced view of their objectives.

Where clients have unrealistic goals the adviser needs to make them aware and negotiate more realistic ones. See Table 7.1 for two examples.

Table 7.1: Renegotiating objectives		
Scenario	Issue	Renegotiation
Retirement	On the basis of current and projected savings, the adviser concludes that the client will not be able to retire at their proposed age of 63.	The adviser concludes that the client will need to contribute to their retirement savings plans for between three and five more years to achieve their target retirement income. The client may agree to this, or decide to lower their income target.
Mortgage repayment	A client with an interest-only mortgage with a savings plan has achieved a much lower rate of growth in the plan over a 15-year term than will be required to repay the loan at redemption in 10 years' time.	The client will have to choose between increasing their contributions, using other capital towards repayment of the loan, or reallocating some, or all, of the plan to higher-risk investments.



Question 7.1

If the adviser considers the client's expressed goals to be unrealistic, what should they do?

A1D Creating a risk profile

Many advisers use questionnaires to establish a client's attitude to risk.

A risk profile sets limits on the extent of the maximum loss likely within different timescales, and can be directly linked to asset allocation and, if required, model portfolios. It is a key factor in creating appropriate portfolios.



Consider this...

Do you think that the pain and grief suffered by people when they lose money is **greater, the same as, or less than** the pleasure they experience when they make money?

Behavioural finance was examined in [chapter 3, section E](#)

Interestingly, research into behavioural finance has established that, in general, people suffer pain and grief approximately **twice as intensely** when they lose money as they experience pleasure when they make money. It appears that a significant degree of 'risk aversion' is part of most people's psychological

make-up. Generalising from the accounts given by successful investors, we can also say that with experience, people can learn to override their immediate reactions of pain or regret, and most clients will do so, at least to some extent, provided they feel that they understand what is happening. It follows that a typical client's understanding of – and attitude to – risk will change as they gain experience of investment.



Risk

The most important conclusion is that risk is inescapably a psychological and subjective issue. The discussion of risk within a finance theory framework takes no account of subjective factors and is, therefore, of limited use in enabling clients to come to terms with the actuality of the risk-return trade-off and its possible consequences for them.

The starting point for an assessment of the client's risk profile is usually a questionnaire. The typical questionnaire will gather information about the **client's attitude to risk** based on hypothetical questions such as: 'How would you feel if the value of your investments fell by 20%?' While this may reveal something about the client's personal attitude to risk, it is important to note that perception and **tolerance of risk** are also socially influenced.



How it works

Herding

'Herding', the tendency of people to imitate others, is a widespread social phenomenon and behavioural finance research has established that it applies to financial as well as social decisions.

For example, many people simply ignored the risks involved in the high-flying tech stocks of the 1999–2000 dotcom bubble, or in buying holiday properties in Spain in 2007, mainly because so many other people were doing it.

The adviser needs to find out what experience the client has had of risk, either with investments or in their business life, to see if this is consistent with their expressed attitude. Recent experience may influence their perceptions and attitudes. Someone who has lost money in the stock market will probably perceive that there is more risk involved in investing in the market than someone who has previously made a profit.

Attitudes and perception of risk can change throughout an individual's life. They will be affected as they experience the positive and negative outcomes of their previous investment decisions, get older or wealthier, or their work situation changes.

The final component of the risk profile is the **client's capacity for loss**. Unlike the other two factors, this is objective.



Example 7.2

If an individual loses 20% of their capital, their income from this will shrink by 20% and their lifestyle may be uncomfortably constrained. The adviser must take this into account in creating a risk profile, even if the person defines themselves as a bold investor. The capacity for loss is determined by the resources available, the consequences of a loss of capital or income and the ability to replace any losses.

It is important that an adviser establishes in detail the returns that a client feels are required, and the level of risk they can tolerate, as it is the client's risk tolerance that will establish realistic return objectives. If an investor expresses their expectations only in terms of returns, there is a danger that a high-target return will lead to an adviser selecting higher-risk assets and the resulting risk may not be acceptable to the client.

The range of possible returns from a selected asset allocation over any time period can be estimated using historical data. It is important to note that future returns will not necessarily conform to those of the past,

so this can be no more than an estimate. Stochastic modelling uses probabilistic methods to estimate the ranges within which returns may fall over future periods, but care must be taken not to allow clients to ‘anchor’ on these returns. In extreme conditions (such as 2008-09) returns can fall below the ranges derived from probabilistic extrapolations of historic data.



Three components of the client’s risk profile

The client’s risk profile should be based on the client’s attitude to risk, tolerance of risk and capacity for loss. The client should confirm their acceptance of their risk profile in writing.

The objective and subjective factors that may influence the client’s risk profile are covered later in this chapter.

When a portfolio is being arranged to meet more than one investment objective, a client may have a different attitude to risk in respect of each objective. This may reflect a phenomenon identified by behavioural finance known as ‘mental accounting’, whereby objectives and the plans to meet them are kept entirely separate, largely, it seems, because it is easier for most people to keep track of them in this way.

In extreme cases, couples may wish to have separate portfolios, each with different risk profiles, or separate portfolios for different objectives (retirement income, capital growth). According to finance theory, this is less efficient and could result in lower returns, but in practice there is no reason why an adviser cannot accommodate this type of request.

A1E Formulating the investment strategy for asset allocation

The investment strategy is applied using an asset allocation based on the client’s risk profile. Asset allocation generally has a much larger impact on portfolio performance than the selection of successful or less successful fund managers. Usually, advisers will construct between three and ten risk profiles, each of which has an asset allocation based on expected risks and returns. For example, Cautious and Adventurous risk profiles might have the following allocations:

	Cautious	Adventurous
Asset class	Percentage of total capital allocated to asset class	
Cash deposits/money market instruments	10%	5%
Bonds	25%	10%
Property	15%	10%
Equities	50%	75%

Total	100%	100%
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A1F Selecting investment funds

It is important to note that allocation of capital to asset classes is only one means of controlling the risk-reward ratio. The selection of investments within an asset class can also play a significant role.

For example, within bonds, allocation of capital to higher-yielding bond funds might be appropriate for adventurous investors, while for cautious investors, funds holding portfolios limited to government bonds and investment grade corporate bonds would be more appropriate.

Likewise, smaller company funds or ‘alpha’ funds would be suitable for adventurous investors while equity income funds would better suit cautious investors, and funds investing in real property are more suitable for cautious investors than funds investing in listed property securities or REITs.

	Bonds	Equities
Lower risk	Gilt funds Global government bond funds Investment grade corporate bond funds	Equity income funds Income and growth funds
Higher risk	Emerging market bond funds High-yield bond funds Tactical bond funds	Alpha funds Smaller company funds Specialist funds (e.g. technology, resources)

While some funds will be common to several portfolios, a large number of individual funds will be required to create a complete set of model portfolios. This requires the adviser to research a significant number of funds, and those unwilling to do this may instead choose to use multi-manager funds where the manager undertakes the research and allocates capital to selected fund managers.

Most advisers create model portfolios for each risk profile, using either their own methods or third-party portfolio modelling tools. These model portfolios will show the percentage of capital to be invested in each set of funds. If the adviser creates their own model portfolios, these should be reviewed and, if necessary, revised at regular intervals.

Portfolios generated by modelling tools will vary depending on the assumptions and selection criteria used as inputs. Advisers using multi-manager funds will need to review these regularly against their peer groups.



If advisers generate their own model portfolios...

If advisers generate their own model portfolios, they need to establish a process for fund research, selection and monitoring.



Question 7.2

How does choice of individual funds within a portfolio affect the risk-reward ratio?

A1G Ethical issues

Client objectives for investments do not always include purely economic goals. Many people have strong ethical reasons for choosing or excluding certain types of investments.

Broadly, socially responsible investing (SRI) reflects the ethical, moral, religious or socially responsible beliefs which can heavily influence the choice of investments.



Ethical and socially responsible investment

In the investment world the expressions 'ethical investment', 'environmental investment', 'green investment', 'responsible investment' and 'socially responsible investment' are often used interchangeably. More recently, the term 'impact investing' has been used to refer to investments which are made where the intention is to generate a beneficial social or environmental impact as well as financial gain. It can be thought of as falling somewhere between charitable giving and socially responsible investment. Also included in this group are the growing numbers of Sharia investments, which meet the strict rules of Islamic finance.

The latest estimate by Vigeo Eiris of the size of ethical and green funds across Europe indicates that UK retail investors invested more than £15bn in these funds in 2016.

There are several different approaches to ethical investment, including the following:

- **Positive screening** involves investing in companies that have a responsible approach to business practices, products or services. For example, some funds focus on investment in those companies that have the best practice in their industries, while others focus on particular themes, such as social or ethical issues or environmental technologies. In the latter case, issues such as biodiversity, alternative energy sources, water management and genetic engineering may be of particular interest to investors.
- **Negative screening** or **avoidance** means not investing in companies that do not meet the ethical criteria that the fund sets. This usually focuses around ethical issues such as alcohol, tobacco and pornography, and animal rights in both testing and the fur trade. This is the oldest and best-known approach to responsible investment.

In many areas there are both negative and positive aspects to a given ethical issue. For example, oil and gas companies may be the leading source of emissions of carbon dioxide, a major greenhouse gas – but they may also hold the key to more environmentally friendly future energy solutions.

There is no single, correct, black-and-white approach to any issue. Approaches may vary from being strictly against something to having no concern about a given issue. However, where there is a wide public consensus about an issue, the approach adopted by different funds may be very similar.



Activity

Ethical investing does not have to mean accepting sub-standard investment returns. Look up the past performance of ethical funds, e.g. at www.ethicalinvestment.co.uk, and consider how these compare to mainstream funds.

Ethical banking

Some smaller banks have specialised and differentiated themselves as ‘ethical banks’ by using social, environmental and/or ethical criteria for their lending and other activities. As with green and ethical funds, they may focus on investing positively in certain areas or emphasise instead the activities or operations not permitted for their business customers; they may also offer a combination of these.

Major banks are increasingly aware of the social and environmental impact of their lending activities, particularly in the developing world, as some have come under criticism for their involvement in controversial projects (for example, the construction of dams for hydroelectric power).

A1H Choice of tax wrappers

Investments should be selected on the basis of expected risk/return characteristics, which are independent of their tax treatment. The selection of vehicles within which to hold investments should follow and not precede risk profiling and asset allocation decisions.

The adviser will often need to recommend allocation of capital to a combination of accounts with different tax treatments. The most important tax features of these accounts are set out in table 7.3. Where the client is to hold investments in several accounts, the key requirement is to hold individual investments within the account giving the most favourable tax treatment, which is relatively easy when all a client’s investments are held on a platform.

Account	Tax on income derived from				Tax on capital gains
	Cash deposits	Fixed interest	Property	Equities	
Direct	0%, 20%, 40%, 45% (1)	0%, 20%, 40%, 45% (1)	20%, 40%, 45% ⁽¹⁾	7.5%, 32.5%, 38.1% ⁽¹⁾	10%, 20% ⁽³⁾
Individual savings account (ISA)	NIL	NIL	NIL	NIL	NIL
Pension	NIL	NIL	NIL	NIL	NIL
Onshore bond fund	20%	20%	20%	NIL	20% ⁽²⁾
Offshore bond fund	NIL	NIL	NIL	NIL	NIL

1. Dependent upon personal tax rate (Note: basic rate taxpayers have a £1,000 personal savings allowance, higher rate taxpayers have a £500 personal savings allowance and dividends from equities received over £5,000 are taxed at 7.5% for basic-rate taxpayers, 32.5% for higher-rate taxpayers, and at 38.1% for additional-rate taxpayers).
2. After allowance for retail prices index (RPI) indexation.
3. Gains in excess of the annual personal capital gains exempt amount on shares, property and fixed-interest investments (other than gilts and qualifying corporate bonds) are added to the individual's taxable income in the relevant tax year. If the aggregate exceeds the higher-rate income tax threshold, a rate of 20% applies to the amount of gains above the threshold, while a rate of 10% applies to the amount of gains below the threshold. Different rates apply to residential property.



Example 7.3

Ben is a higher-rate taxpayer. His £200,000 portfolio is divided equally between an ISA and direct holdings. The recommended portfolio includes a £30,000 holding in bonds. Optimum tax efficiency will be achieved if these are all held within the ISA where the income will bear no tax.

Whilst tax should not be a driver of the asset allocation decision, it can come into play in the selection of assets within asset classes. In particular, for those investors with a higher risk profile, investments in venture capital trusts (VCTs), enterprise investment schemes (EISs) and the seed enterprise investment schemes (SEISs) may be attractive for the tax advantages they offer.

A1I Platforms

Whichever tax wrappers are selected they will often be held on a platform. As you saw in [chapter 6](#), a platform enables a single set of investments to be managed across several wrappers. For example, the client may hold some assets in their own name, some in ISAs and some in a pension account, all on a single platform. This has major advantages in terms of simplicity and convenience for both client and adviser.

In selecting a suitable platform, the adviser must consider the range of tax wrappers available, the range of investments available, and the cost to the client of the platform itself. Advisers will generally use more than one platform since their features and charges vary; the one chosen should be the one best suited to the client's resources and requirements.

A1J Presenting recommendations

Most advisers present their recommendations in the form of a report. To make it easier for clients to grasp, best practice is to present an outline of the client's circumstances and needs with a summary of the recommendations, followed by more detailed sections on risk profile, asset allocation and investment and wrapper selection.

Wherever possible, graphs and charts should be used since most people find it easier to assimilate information in this way. Many advisers provide their clients with an investment strategy statement to explain briefly and clearly why and how a portfolio is constructed.



Example 7.4

A typical statement could be:

Over the ten years to Mr Brown's retirement, the strategy will be to seek growth in capital assuming no requirement for any income or capital withdrawals. Any income generated will be reinvested within the portfolio. The portfolio will use an asset allocation based on Mr Brown's risk profile, which is defined as Adventurous. Capital will be invested in UK-authorized open-ended funds investing in money market instruments, bonds, property, commodities and equities. No fund will account for more than 10% of the capital value. Funds using aggressive growth strategies may account for up to 25% of the capital value. The portfolio will be reviewed at six-monthly intervals.

Where income is required, it is best specified as an actual annual or monthly amount, with targets for any

rate of increase (for example, ‘increasing in line with the consumer prices index (CPI)’). Where income is not required, it should be specified that it is available for reinvestment within the portfolio.

A1K Monitoring the portfolio

The basis and frequency of reviews should be covered in the client report and the client agreement. This may specify that reviews are undertaken six-monthly or annually, and that recommendations for changes will be made only at these times; or that the adviser will make recommendations as and when they consider it appropriate.

The adviser needs to structure a process for reviewing portfolios and generating valuations and reports. An important feature of these is performance of the portfolio, which should be compared with a suitable benchmark such as one of the MSCI Wealth Management Association (WMA) indices. The report should explain any divergence of portfolio performance from the benchmark.

The adviser will need to set up systems for monitoring and reviewing each of the funds contained in client portfolios.

Where appropriate, recommendations should be made for disposal of funds with unsatisfactory performance and their replacement with others.

B Risk and return objectives

The investment process as described is an ideal template. In practice, investment decisions are often subject to constraints that may require the adviser to adjust their recommendations. These constraints fall into two categories: derived respectively from objective and subjective factors. We will consider each in turn.

B1 Client objectives

The main client objectives are concerned with:

- return requirements and
- risk tolerance.

If an investor expresses their expectations only in terms of returns, there is a danger that a high-target return will lead to an investment manager investing in higher risk assets and the resulting risk may not be acceptable to the client.

The primary factor to consider is the risk tolerance of the client, including their ability and willingness to take on risk. That tolerance will determine realistic return objectives.



Reinforce

It is necessary to start with a client’s ‘hoped for’ target return and then temper this by applying their attitude to risk to end up with a more balanced view of their objectives.

Looking at investment solutions that may address these objectives, there are two main categories:

- **Investments that maximise returns for a given level of risk.** Examples of such funds are collective investment schemes, e.g. unit trusts, open-ended investment companies (OEICs), investment trusts and discretionary managed accounts.
- **Investments designed to match future liabilities.** Examples of such funds are defined benefit pension (DB) funds (final salary schemes), life assurance products, general insurance products and investment funds that meet specific income requirements.

In many cases, an investment solution will require a mixture of maximising returns and liability matching (e.g. a mix of investment funds, pension provision and protection products).

B1A Investor risk tolerance

Broadly speaking, investors can be classified into one of five risk classes:

Risk class	Description
No risk	Not prepared to accept any fall in the value of their investments – will invest in cash based products and perhaps short-dated bonds.
Low risk	Cautious – prepared to accept some value fluctuation in return for long-term growth but will invest mainly in secure investments.
Medium risk	Will have some cash or bond investment but will have a fair proportion in asset-based investments using diversified collective investment schemes or a well-diversified share portfolio if their fund is large enough. May have a small amount in higher risk funds.
Medium–high risk	Cash allocation is kept to the minimum. Will be prepared to invest outside the UK and in high risk funds. Will take a long-term view and may choose to sacrifice some diversification for a more focused and volatile portfolio.
High risk	Cash is kept to the minimum. Prepared to have direct holdings in listed and unlisted shares, high risk funds and highly geared unprotected structured products.

Capacity for loss is the client’s ability to absorb any negative financial outcome that may arise from making an investment

Risk tolerance is partly subjective, whereas capacity for loss is largely a matter of fact. Capacity for loss is the client’s ability to absorb any negative financial outcome that may arise from making an investment. Most clients will have some idea of their attitude to risk but they are unlikely to have thought precisely about capacity for loss. For example, a client who is retired and drawing an income from their portfolio is likely to have a reduced capacity for loss. In comparison, someone in their mid-30s will have a greater capacity for loss, as they will have the opportunity to replace any portfolio losses through future earnings.

In a lot of cases, capacity for loss will play the most important role in determining the client’s overall risk

profile.

B1B Investor return objectives

For private investors, return objectives may be specified in terms such as capital preservation, capital appreciation, current income and total return.

Examples of these include:	<ul style="list-style-type: none">• Capital preservation. This is generally for risk-averse investors who want to minimise the risk of loss, usually in real terms. This means they want to achieve a return that is equal to or above the inflation rate.
	<ul style="list-style-type: none">• Capital appreciation. This is usually for longer-term investors where growth in the value of the assets in real terms is the priority, perhaps to build a retirement fund. Under this strategy growth usually comes from capital gains.
	<ul style="list-style-type: none">• Current income. This is often for investors who are focusing on income rather than capital gains. Perhaps income from the portfolio is needed to pay for living expenses.
	<ul style="list-style-type: none">• Total return. This is usually for long-term investors who are looking for growth in the value of a portfolio to come from both capital gains and reinvestment of income.

Investment objectives might also be expressed in general terms, e.g. capital growth, income or a balance of income and capital growth. They may also be expressed more specifically, e.g. an annual income of £5,000 after tax, to provide for school fees of £20,000 a year starting in seven years' time, or to provide the capital to repay a loan in ten years' time.



Both short-term and long-term objectives?

For most clients, it is unlikely that they will be able to express their objectives easily. Most clients have both short-term and long-term aims and the combination of the two objectives need to be considered. The adviser's role is to establish these and guide the client as to how these objectives can be achieved.

B2 Constraints

In addition to establishing the investor's objectives, the investment adviser also needs to consider constraints that impact on the investments made in the portfolio. These include:

- time horizon;
- liquidity;
- tax;
- legal and regulatory factors; and
- unique needs and preferences.

We will look at time horizon and liquidity in more detail since they directly impact on the ability of a

client to take on risk.

B2A Time horizon

Whenever an investment is considered the time horizon of the client must be taken into account:

- As a general rule, the shorter the time horizon, the more important it is to preserve the capital value.
 - If a tax bill has to be paid in six months' time, the investment must be made with the minimum of risk, e.g. in very short-dated gilts or a six-month, fixed-term deposit, rather than in shares or other investments which could go up or down in value. These investments might produce higher returns but, over such a short period, the risk is too great that short-term market volatility could lead to the tax bill not being covered.
- The longer the time horizon, the less important are short-term fluctuations in capital value. Instead it becomes more important to maintain value and to produce returns higher than inflation.
- Because the time horizon is longer, short-term volatility becomes more acceptable as long as the clients are warned of the likelihood of such short-term movements in value.



'Rainy day' fund

In addition to definite requirements for cash, it is generally advisable for clients to hold a float equivalent to between six and nine months' expenditure in the form of easily-accessible cash deposits. This emergency or 'rainy day' fund should be sufficient to cover most contingencies.

B2B Risk and time horizon

Risk is closely related to time horizon, at least with investments like equities where the overall expectation is growth of income and capital. Economic cycles and disasters such as wars may cause setbacks that can last for several years, but in the long term a well-diversified portfolio of investments in businesses or property is likely to recover. However, the investor must be prepared to remain invested in these asset-based holdings for very long periods. The longer an investor can hold on to such investments, the more chance there is of riding out cyclical and other major downturns. This can be seen using the *Barclays Equity Gilt Study 2016*.

- It can be demonstrated that over the period since 1899 equities have generally outperformed cash deposits. Over that period, equities have produced real annualised returns of 5.1% per annum compared to just 0.8% for cash.
- The returns over such a long period, however, disguise periods when cash was the better performer. Equities have outperformed cash in 77 out of the last 114 years, but that still leaves a large minority of periods in which cash was the better performer.
- When the holding period is extended out to ten or more years, equities more consistently produce better returns.
- Table 7.5 illustrates the performance of equities against cash for different holding periods. The first column shows that over a holding period of two years, equities outperformed cash in 77 out of 114 years; thus, the sample-based probability of equity outperformance is 68%. Extending the holding period out to 10 years, the probability of equity outperformance rises to 91%.

Table 7.5: Equity performance

	Number of consecutive years					
	2	3	4	5	10	18
Outperform cash	77	79	81	83	96	97
Underperform cash	37	34	31	28	10	1
Total number of years	114	113	112	111	106	98
Probability of equity outperformance	68%	70%	72%	75%	91%	99%
Source: Barclays Research						

B2C Liquidity

All personal portfolios should include some level of cash liquidity but there are degrees of liquidity. Some key factors are:

- If investors need to draw money to meet an emergency, they should not be forced to realise an investment at an inappropriate time.
- An element of liquidity also allows the investor to take advantage of short-term investment opportunities, such as a new share offering or rights issue.
- Most people need some money that is instantly available. However, they can perhaps hold the bulk of their cash in a form that can be retrieved without penalty after two weeks or even two or three months, so long as they know it is available without loss or penalty at the end of a specific period.
- As longer terms may provide higher returns, it is worth estimating the degree of liquidity likely to be needed.

There is no fixed percentage of assets or cash that is automatically right for every portfolio. An investor with a secure, well-paid job and low outgoings may be less concerned with liquidity than individuals who depend solely on their portfolio for income. Each situation should be examined on an individual basis.

It should be remembered that excess cash is ultimately a relatively inefficient investment, particularly for higher-rate taxpayers, and that the liquidity of individual investments varies considerably.

B2D Risk and liquidity

A need for liquidity will generally reduce the risk that can be taken in the portfolio, or at least the portion of the portfolio that will need to be held in cash or short-term investments. An investor who has cash requirements may not have the flexibility to ride out the short-term volatility in markets.



Question 7.3

Identify two constraints that will have an impact on an investor's ability to tolerate risk.

B2E Resources

People with substantial income and assets have a greater risk capacity; the loss of some capital will not necessarily put their lifestyle at risk. Those with modest capital are often more dependent on it, and therefore have a lower capacity for loss, even though they may express a willingness for more adventurous investment. For example, younger investors with many years left until retirement have the potential to recover any capital losses through future earnings and investment growth, and so have greater risk capacity than those investors who are near to retirement.

A common issue affecting resources is whether a client should pay off a mortgage from an available sum of capital or invest the capital in the hope of securing a higher return. Many people wish to be free of debt and in most cases, where the interest rate payable on the loan is higher than can be secured on bond funds, paying off such capital will make sense. Usually, this will result in an increase in disposable income, part of which could be allocated to long-term savings plans. However, some borrowers may have mortgages with low interest rates, and may be better off investing the capital. Also, it should be noted that many borrowers have loans on terms they may not be able to secure from lenders today.

It is important for clients to realise that short-term debt is likely to carry much higher interest rates and in almost all cases paying it off as fast as possible should be a high priority.



Example 7.5

An adviser is working with a client to put together an investment portfolio. The client has £5,500 of outstanding balances with credit cards, with an average interest rate of 14.9%, which she has been paying off at the rate of £150 per month. The adviser recommends diversion of £5,500 from the proposed investment portfolio to clear these balances immediately.

C Applying asset allocation

Asset allocation enables advisers to generate portfolios that meet the needs of clients. Those needs are for specific sums of money at specific future dates. Portfolios based on asset allocation linked to risk profile are most likely to generate these sums with the least risk of returns diverging from the average annual return.

C1 Risk profiles

To apply the principles of asset allocation to client portfolios, the adviser must understand the level of risk the client is willing to take.

In the past, some of the risk measures have been quite broad. Investors have been placed into 'cautious' or 'low risk', 'balanced' or 'medium risk', or 'aggressive' or 'high risk' categories after a range of different types of investment attitudes have been used to find out which is closest to the client's view.

However, this is a somewhat simplistic approach and too broad – clients can mean different things by 'low risk' or 'medium risk'. Advisers are now able to use quite sophisticated tools to more precisely

measure their clients' attitudes to risk.

There are a number of approaches that can be taken to establish the client's attitude, perception and capacity to take risk, including:

- printed questionnaires;
- computer-based assessments;
- psychometric profiling;
- numerical scales (1–10);
- open discussions; and
- graphical representations.

The most effective approach may be one that incorporates some or all of these elements. Computer-based assessments and psychometric profiling tools are widely available from a number of different sources, both as stand-alone software packages and online. These offer a more scientific approach to establishing risk and often incorporate some or all of the elements listed above, as well as direct statements and closed questions.

Increasingly, many advisers use computer-based risk profiling tools, while others rely on more or less formal interviews. Whatever approach is taken – and often it is a mix – the most important part of the process is usually the discussion between the adviser and the client rather than a formal questionnaire.



Example 7.6

Having completed a risk tolerance questionnaire with your client, you have identified that they are a cautious investor and have a requirement to generate income from their portfolio. Considering this, you recommend they allocate 15% to cash, 40% to bonds, 15% to property and 30% to equities.

The range of investor risk profile classifications and asset allocation models in use within the financial services industry is quite significant. Some firms create their own bespoke risk classifications and model portfolios, while others use software developed by third parties to essentially do the same job. Irrespective of the method being used, the purpose is to determine an appropriate mix of assets that will, based on historical analysis, deliver the required return for a known amount of risk.

The MSCI WMA Private Investor Indices are a set of calculations which indicate the returns that investors might expect from their portfolios. They can be used as a benchmark for assessing and comparing the performance of discretionary fund managers and as a measure to compare the performance of similar funds.

Example 7.7 is based on the MSCI WMA Private Investor Indices as at April 2017. These provide investors with an objective benchmark against which to measure their investment portfolios.

The indices represent the performance for growth-orientated, income, balanced and conservative funds. Each of the portfolios contains different proportions of UK shares, international shares, bonds, cash and alternative investments to reflect the investment aims.



Example 7.7

Targeting specific client needs

Conservative index

Income index

Growth index

Balanced index

Underlying asset
index

UK equities	19%	32.5%	40%	32.5%	MSCI United Kingdom IMI
International equities	13.5%	20.0%	37.5%	30%	MSCI All Country World Index (ACWI) Ex-UK (in GBP)
Bonds: UK gilts	10%	5%	2.5%	5.0%	Markit iBoxx £ Gilts Index
Bonds: £ corporates	25%	17.5%	5%	10.0%	Markit iBoxx £ Corporates Index
Bonds: £ inflation-linked	5%	2.5%	0%	2.5%	Markit iBoxx UK Gilt Inflation-Linked Index
Cash	5%	5%	2.5%	5%	Cash Equivalent (GBP Libor – 1% w/floor 0%)
Real estate	5%	5%	5%	5%	MSCI UK IMI Liquid Real Estate
Hedge funds/alternatives	17.5%	12.5%	7.5%	10%	Custom Index 50% Cash + 50% MSCI World DMF Index
Total	100%	100%	100%	100%	

	Global growth index	Underlying asset index
Developed world equities	90%	MSCI World Index (in GBP)
Emerging world equities	10%	MSCI Emerging Market Index (in GBP)
Total	100%	

Table 7.6: Asset allocations between different risk profiles				
	Proportion of capital allocated to:			
Risk profile	Cash deposits	Bonds	Property	Equities
Cautious income	15%	40%	15%	30%

Cautious growth	15%	35%	10%	40%
Balanced income	10%	30%	15%	45%
Balanced growth	10%	30%	10%	50%
Income and growth	5%	25%	15%	55%
Growth	5%	15%	15%	65%
Adventurous	5%	10%	10%	75%



Use of absolute return funds or hedge funds

These allocations are based only on the traditional major asset classes. Today, many advisers will use **absolute return funds** or **hedge funds** in their portfolios. These can be considered as a separate asset class, with their potential limitation for loss and relatively stable returns making them an attractive contributor to portfolio stability.

C2 Diversification

Advisers can achieve diversification not just through asset allocation but through choice of fund managers using different styles and methods. Each style is likely to go through periods of above- and below-average returns, though predicting these in advance is difficult. For example, value-based strategies often produce superior performance in relatively stable economic conditions, while momentum styles tend to work best during periods of rapid growth. An adviser can tilt a portfolio towards styles that appear best suited to current conditions, but include some funds of different types as a balance.

Likewise, large-cap and small-cap equities undergo periods of superior performance, as do investment grade and high-yield bonds. In each asset class, there is a variety of asset sub-classes and investment strategies, which can be accessed either through active funds or through a growing range of passive (index tracker) funds, including exchange traded funds (ETFs).

C3 Strategic and tactical asset allocation

Asset allocation methodology is based on the benefits of diversification and is therefore essentially defensive, placing capital protection before capital growth. If an investor's aim is out-and-out capital growth, then as Warren Buffett has remarked, the right technique is not to diversify but to concentrate capital.



Tools of asset allocation

The prime tool of asset allocation methodology is the use of a risk profile to determine a suitable strategic asset allocation for the client. Some advisers use only strategic asset allocation with regular rebalancing.

Some advisers seek to counterbalance the defensive tendencies of asset allocation methodology by applying tactical asset allocation. This can have two different meanings.

In one, the proportions of capital to be invested in any one asset class are set as a band, say, 10–20%.

At any time more capital can be allocated to one class to take it to the top of its range, while another is reduced to the bottom of its range. These tactical moves away from the mid-points of the permitted range for each asset class may be implemented on a short-term basis. See Table 7.7 for a simplified example.

Asset class	Strategic range %	Tactical allocation %	Variation from mid-point %
Cash	10–20	10	–5
Bonds	10–40	20	–5
Equities	45–75	70	+10
Total	100	100	–

The second meaning is for allocations within asset classes, where you could say that a decision to hold half of a holding of US equities in the form of small-cap funds based on considerations of growth and valuation was tactical, and independent of the strategic decision as to the proportion of capital to be held in US equities.



Significant variations to asset allocations

In practice, significant variations to asset allocations tend only to be applied to growth portfolios, since large-scale changes tend to cause interruptions in the flow of income from a portfolio that would be unwelcome to an income-oriented investor.

C4 Rebalancing

See [chapter 8, section L6](#) for more on rebalancing portfolios

If the asset allocation and portfolio are selected on the basis of a correct understanding of the client's needs and risk tolerance, then the adviser should recommend a rebalancing of the portfolio if variations in returns cause significant changes.



How it works

For example, if the initial allocation to equities was 50%, but a powerful bull market meant that after two years the actual allocation at that time was 70%, then the correct approach would be to sell enough equities to bring them back to 50% of the capital. The cash can be allocated to top up the other asset classes, which would have declined to smaller proportions of the capital.

Portfolio theory and 'efficient frontier' portfolios are based on frequent rebalancing, though research suggests that rebalancing more frequently than every six months yields little additional benefit. Rebalancing effectively assumes that reversion to the mean will prevail, and the evidence for this is strong enough (though timescales of reversion are unpredictable) to make this a profitable strategy.

C5 Accumulation and decumulation

Whether a client is accumulating capital or drawing upon it is a key issue in portfolio construction. A body of research suggests that for many people in their 60s, an average decumulation rate of over 4% risks running capital down to almost nothing before death – which is now not likely to occur until after the age of 90 for someone in good health.

There are many important factors that advisers need to take into account in projecting portfolio cash flows in decumulation. These include:

- initial yield on investments;
- overall rate of income generated;
- likely level of inflation and interest rates; and
- probably rate of growth in company dividends.

In many cases, clients will want to draw more income than can reasonably be assumed to be sustainable, and whilst it is legitimate to adopt a higher-risk investment strategy in an attempt to compensate, the client must be made aware of the risks involved, preferably not just at the outset but on the occasion of every portfolio review.

In contrast, clients who are accumulating assets can take advantage of cost averaging through regular purchases. Also, if returns do fall short of those expected, the client usually has plenty of time for any shortfall to be made good. In contrast, older clients who suffer capital losses have no such opportunity.

Thus with decumulation portfolios, there are strong grounds for 'taking money off the table' after any period of high returns, and using the increased quantity of cash to fund immediate income requirements.



Key points

The main ideas covered by this chapter can be summarised as follows:

Providing investment advice

- Giving investment advice can never be a purely mechanical or mathematical process.
- Providing professional investment advice to consistent standards requires the adviser to adopt and adhere to a clearly defined process.
- The process of providing investment advice includes:
 - establishing and defining the relationship between the client and the adviser;
 - gathering client data, determining goals, expectations and any ethical issues;

- analysing and evaluating the client's financial status;
 - creating a risk profile;
 - formulating the investment strategy for asset allocation;
 - selecting investments, funds and products;
 - selecting a choice of wrappers for tax efficiency;
 - presenting and implementing the recommendations;
 - monitoring the portfolio and making any necessary adjustments; and
 - rebalancing the portfolio, switching out of underperforming funds.
- At the start of a client relationship an adviser should provide the client with information about the scope of the services that are being offered and the cost of any work that the adviser will carry out.
 - Clients are likely to have desires or 'wants' that may be unrealistic in terms of their timescale or their cumulative cost. The adviser's role is to identify the client's main needs, prioritise them and establish if these are achievable with the resources available.
 - The client's risk profile should be based on the client's attitude to risk, tolerance of risk and capacity for loss. The client should confirm their acceptance of their risk profile in writing.
 - The investment strategy is applied using an asset allocation based on the client's risk profile. Asset allocation generally has a much larger impact on portfolio performance than the selection of successful or less successful fund managers.
 - Client objectives for investments do not always include purely economic goals. Many people have strong ethical reasons for choosing or excluding certain types of investments.
 - The selection of vehicles within which to hold investments should follow and not precede risk profiling and asset allocation decisions.
 - In selecting a suitable platform, an adviser must consider the range of tax wrappers available, the range of investments available, and the cost to the client of the platform itself.
 - Best practice is to present an outline of the client's circumstances and needs with a summary of the recommendations, followed by more detailed sections on risk profile, asset allocation and investment and wrapper selection.
 - The adviser will need to set up systems for monitoring and reviewing each of the funds contained in client portfolios.

Risk and return objectives

- A client's risk tolerance, in terms of their ability and willingness to take risk, will help determine realistic return objectives.
- Return objectives are often specified in terms of capital preservation, capital appreciation, current income and total return.
- Constraints will affect how a portfolio is invested, these include time horizon, liquidity, tax, legal and regulatory factors, and unique needs and preferences.
- An investor with a long time horizon is in a better position to take on risk, as they can usually ride out volatility in markets and so will tend to invest more in asset classes such as equities.
- The higher the need for liquidity, the less risk the client is likely to take and a portion of the portfolio will need to be held in cash.

Applying asset allocation

- Asset allocation enables advisers to generate portfolios that meet the needs of clients.
- To apply the principles of asset allocation to client portfolios, the adviser must first define a set of risk profiles corresponding to the preferences, risk tolerance and risk capacity of clients.
- Advisers can achieve diversification not just through asset allocation, but through choice of fund managers using different styles and methods.
- Asset allocation methodology is based on the benefits of diversification and is essentially defensive, placing capital protection before

capital growth.

- The adviser should recommend a rebalancing of the portfolio if variations in returns cause significant changes.
- Whether a client is accumulating capital or drawing upon it is a key issue in portfolio construction.



Question answers

- 7.1 The adviser should explain to the client why the goal(s) is/are unrealistic – and assist them to frame more realistic ones.
- 7.2 By selecting funds with a risk-reward ratio lower or higher than the market average, an adviser can reduce or increase the prospective returns and volatility of the portfolio.
- 7.3 Time horizon of the investor and their liquidity requirements will affect their ability to take risk.



Self-test questions

- | | |
|----|--|
| 1. | Why is 3-monthly volatility a relatively unimportant measure of risk for investment strategies with a 20-year time horizon? |
| 2. | Why is it a good idea for investors to keep some of their investment portfolio in a liquid, easily accessible form? |
| 3. | If a client is saving for retirement in 15 years' time, explain why they are more likely to have a higher proportion of their portfolio in equities than in short-dated gilts. |

You will find the answers at the back of the book

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8 The principles of investment planning

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Key points

Question answers

Self-test questions

Learning objectives

After studying this chapter, you should be able to:

- explain the principles and advantages of asset allocation methods;
- discuss the weaknesses and limits of probabilistic methods of creating portfolios;
- allocate risk profiles to clients based on capacity for and tolerance of risk;
- use portfolio modelling tools to generate portfolios;
- distinguish between strategic and tactical asset allocation;
- apply filters to fund selection to generate shortlists for detailed evaluation;
- use ratio analysis as part of the fund selection process;
- discuss the advantages for client and adviser in the use of platforms;
- explain the importance of the portfolio review process; and
- discuss which factors should be considered in a portfolio review.

Introduction

In this chapter, we will start by considering the main asset allocation methods (examining stochastic modelling and strategic and tactical asset allocation). The rest of the chapter considers the practicalities of portfolio construction for clients. This chapter builds on the theory studied in earlier chapters.

Key terms

This chapter features explanations of the following:

Active funds	Asset allocation	Bottom-up method	Correlation
Discretionary management services	Fund management styles	Fund selection	Passive funds
Platform accounts	Portfolio construction	Portfolio optimisation	Portfolio reviews
Risk profile	Stochastic modelling	Strategic and tactical asset	Tax wrappers

		allocation	
The efficient frontier	Theoretical approach to asset allocation	Top-down method	Use of derivatives and hedging
Use of structured products			

A The main approaches to asset allocation

There are two principal approaches to asset allocation: the **theoretical** and the **pragmatic**. In practice, most advisers use elements of both.

Asset allocation is, in essence, a defensive strategy, the main focus of which is on the preservation of capital and the reduction of risk.



Consider this...

As every entrepreneur knows, concentration of capital is the strategy for building wealth, while diversification is primarily a wealth-preservation strategy.

A1 Theoretical approach to asset allocation – modern portfolio theory (MPT)

The theoretical approach to asset allocation is based on the work of Harry Markowitz. It uses mathematical analysis and techniques with the aim of obtaining the desired risk-return trade-off, representing the maximum return consistent with a given level of volatility, or the lowest volatility consistent with a desired rate of return. These ‘optimal’ portfolios can be created from sets of asset classes using historic data for returns and volatility.

For more on MPT, see [chapter 3, section A](#)

In particular, the returns and volatility of a portfolio will depend not just on volatility and return rates of the various investments it contains, but on the correlation between assets. The addition of an asset to a portfolio with higher-than-average returns and volatility can result in a reduction in the volatility of that portfolio. For instance, this can happen if the new asset’s returns have a low or negative correlation with most of the assets in the portfolio.

A2 Pragmatic approach to asset allocation

The division of capital between different asset classes was practised long before the creation of MPT. Practitioners recognised the reduction in risk that resulted from owning different asset classes. Instead of using probabilistic analysis to derive optimal portfolios, pragmatists simply use long-run average rates of return from the relevant asset classes, together with historic data on the maximum range of returns over different time periods.

Rather than weighting capital allocations purely on the basis of this data, **pragmatists use forward-looking judgments of likely returns and volatility to determine portfolio weightings**. Often these judgments will reflect the expectation that both returns and volatility will revert to their historic means over some selected timeframe.

A3 Combining approaches

Investment decisions are inevitably about the future, not the past, and theorists therefore often adjust the inputs to their models so that expectations rather than historic data are used.

In particular, they are aware that using relatively short runs of recent data (three years is typical in the case of volatility) can result in allocating too much or too little capital to an asset class. Adjustment of both volatility and returns using mean-reversion is also common.



Consider this...

Pragmatists today tend to pay closer attention to recent volatility in assessing the overall level of risk in a portfolio than they did before the creation of MPT.

A4 Strengths and weaknesses of the approaches

The theoretical apparatus of MPT is not particularly robust. Many of its elements have been questioned in recent years, and finance theory, on which MPT is based, has itself been under heavy criticism in the wake of the financial crisis. The tendency of asset returns and volatility to correlate closely during crises was already known but reached extreme proportions in 2008/09, when virtually all asset classes with the exception of government bonds and cash delivered negative returns. The result was that optimised portfolios did not deliver the expected benefits of diversification.

A common response to this is that probabilistic techniques of portfolio creation work well during 'normal' conditions but not in crises, and that provided clients understand this, the methodology is acceptable. But without any method of predicting how frequent or how severe crises will be, the usefulness of this approach is limited because the biggest potential causes of loss derive from uncertainty.



A purely pragmatic approach?

A purely pragmatic approach, however, is subject to the risk of bias for or against asset classes based on subjective estimations of prospective returns. This can result in portfolio risk turning out much higher than expected.

B Portfolio optimisation

Asset allocation based on MPT derives portfolios from a process of optimisation. It starts with a matrix of potential assets that may be included in the portfolio (or more often, with asset classes). This shows their historic annualised returns, volatility (standard deviation) and correlation. A large number of sample portfolios containing these assets in different proportions can be generated, and their historic returns and volatility plotted.

Efficient frontier

Those with the highest returns for a given level of volatility (or least volatility for a given return) will form a series: the 'efficient



frontier'. Each portfolio represents the best choice for an investor whose risk tolerance is represented by the portfolio's volatility rating.

The efficient frontier was discussed in [chapter 3](#) and you will remember it represents the set of portfolios that have the maximum rate of returns for every given level of risk with each portfolio lying on the efficient frontier offering the highest expected return relative to all other portfolios of comparable risk. A rational investor will only ever hold a portfolio that lies somewhere on the efficient frontier. However, it is not possible to say which portfolio an individual investor would prefer, as this is determined by the maximum level of risk that the investor is prepared to take.



Efficient or optimised portfolios

Efficient or optimised portfolios are those that are expected to deliver the highest return for a given level of risk, or the least risk for a given level of return.

B1 Correlation

The extent to which an asset contributes to the overall risk-return characteristics of a portfolio is determined by its correlation with other assets in the portfolio. Table 8.1 shows a correlation matrix for five assets. From this we can read higher and lower degrees of correlation; the assets with lowest correlation (such as A and D) will contribute most to a reduction in portfolio volatility.

Table 8.1: A typical asset correlation matrix

	Asset A	Asset B	Asset C	Asset D	Asset E
Asset A	1.00	0.69	0.84	0.25	0.37
Asset B	0.69	1.00	0.77	0.26	0.41
Asset C	0.84	0.77	1.00	0.41	0.38
Asset D	0.25	0.26	0.41	1.00	0.76
Asset E	0.37	0.41	0.38	0.76	1.00

B2 Assumptions in optimisation

Optimisation models depend on assumptions, and the nature of these and their possible weaknesses need to be understood.

Table 8.2: Optimisation assumptions and weaknesses

Risk	<ul style="list-style-type: none"> Models assume returns fall into a normal distribution measured by standard deviation, yet returns do not always follow a normal distribution.
Historic data	<ul style="list-style-type: none"> Data for risk, returns or correlation may be a poor guide to the future.
Forecasts	<ul style="list-style-type: none"> Forecasts for return, risk or correlation may be inaccurate.
Costs	<ul style="list-style-type: none"> Optimisation models may assume rebalancing at a frequency that imposes unrealistically high transaction costs, which often are not taken into account.
Implementation	<ul style="list-style-type: none"> A portfolio manager may use specific assets which differ from those used in the modelling process.

B3 Stochastic portfolio modelling

Pragmatic users of asset allocation tend to use the historic range of returns to estimate the maximum and minimum returns that could be earned in future.

In contrast, stochastic modelling applies a mathematical technique to generate a probabilistic assessment of returns and volatility. It does this by specifying a number of factors, each of which may vary within a determined range.



Stochastic modelling assumptions

For example, interest rates may vary between 1% and 5%, or inflation may vary between 1% and 4%, over a specified time period.

The model takes an initial set of assets, assumes that their behaviour is affected in a specific way by a change in one variable, and generates thousands of scenarios using randomised combinations of variables.

The outcomes are plotted and the most common outcome is taken as the central or most likely path of the portfolio in respect of returns and volatility.

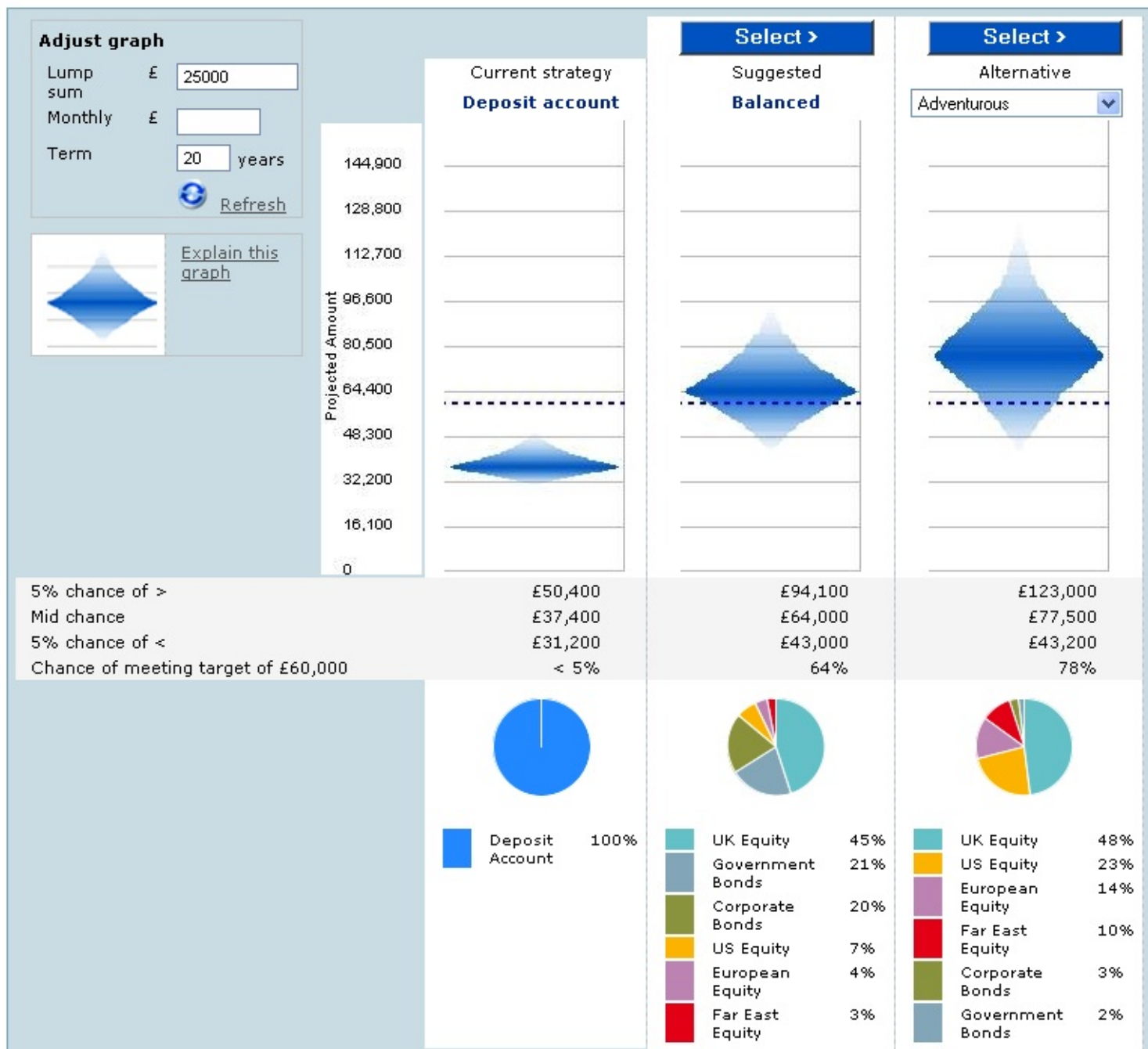
Usually, results are plotted with a narrow central band representing the most likely outcome and progressively wider bands around it representing less likely ones.

See Figure 8.1 for an example – in which there is a target income of £60,000.

Figure 8.1: Stochastic model output: portfolio forecast – 20 years



Portfolio forecast



Source: e-Value

! Use of stochastic modelling
 Stochastic techniques are even more dependent on assumptions than optimisation models. Such models need to be used with caution. Often, a very small change in one assumption will result in a large change in the output. A good understanding of the effects of variations in assumptions is essential.

? Question 8.1
 What is stochastic modelling?

C Strategic and tactical asset allocation

Strategic asset allocation is for the long term and will only be adjusted in extreme conditions or if the

client's requirements or circumstances change.

Most practitioners of asset allocation methods focus on strategic asset allocation, for two main reasons:

- If the adviser is confident in having specified the client's requirements and risk tolerance then, in theory, there is an ideal asset allocation to which their portfolio should conform.
- MPT says it is not possible to 'time the market', which means that switches between asset classes are as likely to incur loss as to generate profit.

However, some advisers employ **tactical asset allocation** by having asset allocation models that give a range for the percentage of capital in each asset class. If the range given for equities is 60% to 70%, then any deviation from the central 65% can be regarded as a tactical move, to be adjusted as the adviser's assessment of the outlook changes. This places more onus on the adviser to monitor portfolios and recommend variations in tactical positions.

It is also possible to use models where a proportion of capital (say, 80%) is allocated to asset classes in the conventional way, and the balance (20% in this case) is used 'tactically' to over-weight certain assets. If this is done opportunistically and without re-evaluation of the portfolio, the result can be that the volatility becomes much higher than originally intended.

Tactical asset allocation does to some extent override mathematical models of portfolio construction with judgment calls on asset classes. This may be obscured by the use of other mathematical techniques to select the asset classes which are over- or under-weighted.



Use of tactical allocation methods

Tactical allocation methods are more often applied by discretionary fund managers than by those operating on an advisory basis.

C1 Implementing asset allocation

Asset allocation methods derive from MPT, which also implies that the market is efficient, at least in the sense that the current market price represents investors' collective best guess about the future and that it is difficult to beat this 'wisdom of crowds' by active selection. This is the theoretical argument for using index tracker funds. The pragmatic argument is the scores of academic papers studying actively-managed, collective-investment fund performance over the past three decades, none of which have found more than very minor tendencies for superior performance to be maintained from one period to the next. Most academics have concluded that selecting actively managed funds is not worthwhile for the individual investor, who is more likely to lose than gain from the exercise. Schools of thought suggest:

- One school of practitioners applies this by implementing asset allocation exclusively through the use of '**passive**' index-tracking funds. By definition, the volatility of the portfolio cannot exceed that of the indices used, whereas as soon as active funds are used, both risk and return may diverge from the market averages.
- Other practitioners believe they can identify **superior active funds** and implement asset allocation exclusively through such funds, while a third group combine active and passive funds within portfolios on a pragmatic basis.

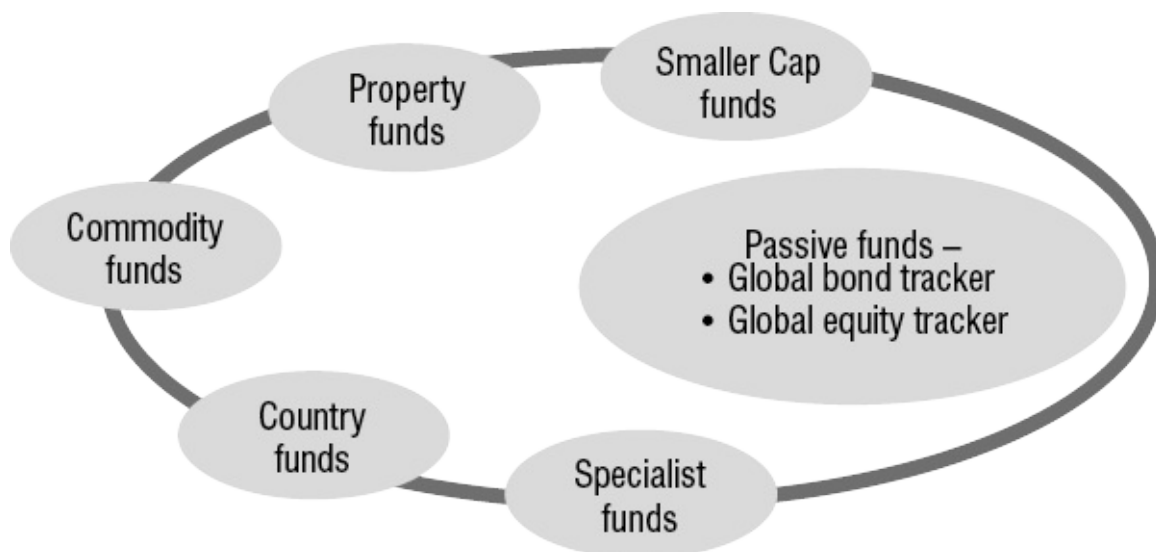
**Consider this...**

They observe, for example, that there are very few actively managed North American equity funds that have beaten their benchmark (usually the S&P 500 Index) with any consistency, and therefore use passive funds to invest in the US, while using active funds for the Japanese market, where many funds have beaten their benchmark index with reasonable consistency.

- Some practitioners use passive funds as ‘core’ portfolio holdings, and satellite active funds to complement the core and give potential for higher returns. See Figure 8.2.

However, the distinction between active and passive is not necessarily as clear-cut as this suggests. Every index can itself be considered to be an active portfolio (constituents are chosen by rules and altered in accordance with rules). The capitalisation-weighted indices such as the S&P500 and the FTSE100 (that have been historically used as benchmarks by institutional investors) are only one means of representing the listed-equity asset class. Equal-weighted and fundamental-weighted indices are equally valid. The choice of index to represent an asset class is itself a significant investment decision.

Figure 8.2: Core-satellite management

**Passive funds**

Cost and efficiency are the reasons some advisers use passive funds as part of a portfolio.

D Alignment with client objectives

To create an appropriate portfolio, the adviser needs to understand the client’s risk tolerance, their capacity for risk and their target for returns (see [chapter 7](#)). Together, these will determine the investments that are suitable. Usually, risk tolerance, risk capacity and a return target are combined into a ‘risk profile’ that specifies the target rate of return over an appropriate period.

**Consider this...**

It could, for example, state that the target is an annualised return of 9% over a five-year period, with a maximum probable loss of 15%.

Risk tolerance can be regarded as a composite of risk perception (often superficial and influenced by recent events) and attitude to risk, formed through family background, education and lifetime experience.

It can be measured through calibrated questionnaires, though academics continue to debate the stability and reliability of the scores. At best such assessments deliver a snapshot at one point in time and, crucially, it is known that risk tolerance usually changes over time so that regular re-assessment of tolerance is desirable, especially if there have been major changes in the client's circumstances.

Risk capacity is a more objective measure of the client's ability to withstand losses or shortfalls in returns.

Table 8.3: Assessment of risk capacity
Assessment of risk capacity is regarded as an essential step in determining suitability by regulators. It requires consideration of circumstances and consequences, for example:
<ul style="list-style-type: none">• Would the client suffer an unacceptable reduction in their standard of living if pension income was £5,000 a year lower than expected, because of a shortfall in pension fund growth?• Would encashment of investments at a capital loss (how great a capital loss?) threaten the client's standard of living now or in the future?• What percentage of the client's overall wealth (or what multiple of their annual income) is being placed at risk, and how great is that risk?
Vulnerability to loss reduces risk capacity, while a longer timescale and large expectations (say of inheritance) may increase it.

Investigation of risk capacity will tend to lead the adviser to consideration of drawdown – the maximum historic loss incurred on the proposed asset mix over the relevant timeframe.

Allocation of a risk profile should be based on consideration of risk capacity as well as of risk tolerance.

If formal risk profiles are not used, the adviser still requires the timeframe, the annualised target return and the maximum permitted loss, as inputs to generate a suitable asset allocation. Then the adviser can create a portfolio in the following ways in ascending order of complexity:

- **Historic:** using historic data for return, risk and correlation for the relevant asset classes, the adviser can create a portfolio that would in the past have generated the required returns with the given risk.
- **Adjusted historic:** taking into account the historic ranges of returns and volatility over relevant time periods, the adviser can adjust return and volatility expectations, which will alter the allocation of capital to the various asset classes.
- **Stochastic:** using a portfolio modelling tool, the adviser can simply input the required returns, expected volatility and time period and rely on the tool to generate an optimal portfolio.

Whichever method is used, the adviser will need to explain why the chosen portfolio matches the client's requirements. Care should be taken to specify the circumstances in which the portfolio might fail to meet its objectives.

E Portfolio construction

Within an asset allocation framework, portfolios are created applying the same techniques to the selection

of individual investments as are applied to asset classes.

The essential data for any potential investment is return, volatility and correlation. In theory, a share portfolio could be constructed simply by using this data for a large number of securities. However, this would require a large amount of data processing and might expose the portfolio to unanticipated risks.

E1 Top-down method of portfolio construction

The aim of portfolio construction has been to achieve diversification on the basis that this should reduce risk. In practice, it has usually followed a top-down process, broadly in this order:

1. Determine asset allocation, e.g. invest 50% of the fund in equities.
2. Allocate the geographical distribution, e.g. UK 30%, North America 20% etc.
3. Choose the sector weightings, e.g. mining 5%, pharmaceuticals 2% etc.
4. Stock or fund selection, possibly taking into account income and socially responsible investing (SRI) considerations as well as reflecting investment performance issues.

However, economic globalisation and the closer correlation of equities on a global basis during crises mean such benefits cannot be assumed to apply at all times. Some theorists argue that steadily increasing globalisation will result in greater correlation of equities in different areas of the world. Many investment managers now assess large companies, such as the large oil producers, car manufacturers, and pharmaceuticals, in a global context, and theme funds, such as natural resources, agriculture, technology and equity income, are increasingly run on a global basis.

Often portfolios constructed on the basis of geography will be 'benchmark-aware'. If a portfolio is compared with a specific index, the manager will take account of stock weightings within the index. Any divergence from these weightings represents a risk to the manager, in that it can create underperformance as well as outperformance. The extent to which a manager will diverge from index benchmarks is therefore a significant factor in assessing a fund. Portfolios that diverge significantly from index benchmarks will typically display greater short-term volatility. The question for advisers is whether this is a price worth paying for longer-term performance that exceeds the benchmark.



Active funds

Active funds levy fees much higher than those of passive index-trackers, and need to demonstrate that they are seeking to add value and are not simply 'closet index trackers'.

The top-down method is usually applied in a consistent way within a group of funds by managers following a set of house rules.

E2 Bottom-up method of portfolio construction

Managers applying the bottom-up method of portfolio construction pay no attention to index benchmarks. They select stocks purely on the basis of their own criteria (value, momentum, Growth At A Reasonable Price (GAARP), etc.) and may end up with significant allocations to countries or sectors.

In practice, management group house rules restrict the extent to which capital may be concentrated in this way, but such portfolios can be much more volatile than those constructed using the top-down method.

The bottom-up method is usually dependent on the style or approach (see below) of the individual fund manager or team of managers.

E3 Combined approaches

Many management groups claim to apply elements of both top-down and bottom-up approaches. The key question in fund assessment is which element is dominant. This may vary within a group of funds, especially with ‘star’ managers who have developed their own personal style over a period of years.

It is also important to identify any change in the approach used by a fund manager or management group, since it is likely to affect the volatility of their funds.

E4 Fund management styles

A fund management style is an approach to stock selection and management based on a limited set of principles and methods. The most widely recognised pure styles are shown below:

Value	<ul style="list-style-type: none"> • This is the oldest style, dating back to Warren Buffett’s 1930s mentor Ben Graham. • Its core statement comes from Graham: ‘In the short run, the stock market is a voting machine; in the long run, it is a weighting machine.’ Votes are investors’ purchases and sales; what the machine weighs is profits, dividends and asset values. • The value investor believes that by deep and rigorous analysis they can identify businesses whose value is greater than the price placed on them by the market. • By buying and holding such shares (often holding for long periods) they can earn a higher return than the market average. Managers of ‘equity income’ or ‘income and growth’ funds often adopt this style, since ‘out of fashion’ stocks often have high dividend yields.
GAARP	<ul style="list-style-type: none"> • GAARP is based on finding companies with long-term sustainable advantage, in terms of their business franchise, quality of management, technology or other specific factors. • Proponents argue that it is worth paying a premium price for a business with premium quality characteristics. Many of its proponents use screens to identify potential stocks. • The style is used mainly by active growth managers.
Momentum	<ul style="list-style-type: none"> • Studies have shown that in equity markets, there is a small tendency for both good and bad performance to persist, although these studies do not conclusively show that it can generate a sufficiently large extra return to compensate for trading costs. • Momentum is the strategy most widely adopted by middle-of-the-road fund managers. • Successful momentum investors have to use this type of analysis to be ahead of the latest swing in opinions. ‘Sector rotation’, where sectors are expected to perform well at particular points in the economic cycle, is one example of momentum investing.
Contrarianism	<ul style="list-style-type: none"> • The thesis of contrarian investors is that average opinion is usually wrong, and that high returns can be achieved by going against the trend. • Correctly judging the point where a trend has reached an extreme of optimism or pessimism is difficult and risky. • This style is found most often in hedge fund managers.



Example 8.1

For example, contrarians would have sold out of tech stocks well before their peak in 2000. But they might also have bought bank stocks after their first big declines in 2008 and suffered further losses as their share prices kept falling.

In practice, successful managers usually develop their own personal style over a period of years, usually based on one or other of the major styles. Extremely successful managers have written books explaining their style.

Some fund management groups claim to adopt a multi-style approach where they alter their style in tune with prevailing market conditions. In this case, careful analysis of performance will be required to identify whether these changes actually occur and, if so, whether they add value.

E5 Use of derivatives and hedging

The latest trends in portfolio construction use derivatives to separate the market-related return (beta) from the specific return (alpha). Or a fund may aim to 'lock in' positive returns by purchasing index put options, thus limiting the potential subsequent loss. Such techniques, formerly the province of hedge fund managers, are now commonly adopted within UK-authorized funds governed by undertakings for the collective investment of transferable securities (UCITS) rules.



Example 8.2

A portfolio manager may buy Japanese shares and at the same time sell short a Japanese stock market index future. Then, they will make a profit so long as the chosen securities perform better than the index. This return, independent of the direction of the market, is 'alpha'.

Managers often apply such strategies as 'overlays', where a core portfolio is held and derivatives are used to alter currency and market exposures.

Where such strategies are employed, they should be clearly disclosed in fund prospectuses. Advisers need to understand the range and limits of the strategies, and their likely effects on returns and volatility.

E6 Use of structured products

An alternative to the use of funds is structured products (examined in [chapter 6.2](#)), which typically limit the capital risk of equity investment in return for a lock-in period of up to six years. Managers use derivatives to secure the returns, so all structured products involve counterparty risk, the returns being dependent on the bank from which the derivatives are bought. Specialist services analyse structured products and rate them using probabilistic methods:

Structured products are examined in [chapter 6.2. section R](#)

- Some structured products give 'hard protection', in which case a given return (say, a return of 120% of the FTSE100 Index or full return of capital, if the index is lower at redemption) is guaranteed.
- Some structured products only give 'soft protection', in which case the investor's capital is at risk if a threshold is breached. For example, an income of 7% annually may be payable with full return of capital unless the index falls by 50% or more, in which case capital loss is on a pro rata basis.

Structured products are difficult to accommodate within a conventional asset allocation framework. Many advisers will regard capital placed in structured products as in the 'low risk' category and agree a higher risk profile for the client's remaining capital than would apply if they had not invested in the structured product. In this case, care must be taken to review the situation when a structured product is redeemed, since the residual portfolio may then represent a higher risk profile than is appropriate.

Structured products may often seem to provide exposure to relatively risky asset classes, but with valuable limitations to the downside risks. On that basis that can seem attractive. They can, however, have some limitations and advisers should be aware of these when considering their role in a client's portfolio:

- Many structured products are not very liquid in terms of early access, and early encashment can lead to significantly reduced returns. Some exchange traded funds (ETFs) have similar characteristics to certain structured products and may provide greater liquidity.
- The timescale over which a structured product provides its planned returns may not in practice correspond to an appropriate timescale for the investor.
- When downside protection is especially desirable, it may turn out to be rather expensive.
- The proposition may be too confusing with too many balancing features and conditions.

Assessment of counterparty risk is problematic, since in the past highly-rated financial institutions acting as structured product counterparties (e.g. Lehmans) have failed. Unlike most market risks, counterparty risk is binary (failure can mean an instant 100% loss) and probabilistic assessment may not deal adequately with risk capacity issues for clients. Many providers now offer full collateralisation to mitigate the risk, though at the cost of lower potential returns.

F Fund selection

There are thousands of actively managed funds available in the UK and offshore.

Fund selection requires methods of filtering to generate much smaller lists of potential investments. The main criteria used in fund selection are:

- fund objective;
- costs and charges;
- strength and reputation of management group;
- skill and reputation of individual fund manager, including past performance; and
- type and structure of fund.

We'll consider these in turn.

F1 Fund objective

For more on the IA and fund sectors, see [chapter 6.1, section B1](#)

The Investment Association (IA) divides funds into sectors containing up to several hundred funds. These funds do not necessarily share a common investment objective, though they may invest in the same area.

For example, of funds investing in Europe, some aim for capital growth from unconstrained concentrated stock selection, others for growth from diversified mid-cap and large-cap stocks, and others to generate a rising dividend income from a large-cap portfolio. Managers' pursuit of each of these objectives should generate different risk-return characteristics.

F2 Costs and charges

The main charges applied by UK-authorized funds are:

- **AMC.** The annual management charge (AMC) applied as a percentage of assets under management (AUM). For passive funds, the usual range is 0.2% to 0.75% and for actively managed funds from 0.75% to 1.75%.
- **OCF.** The ongoing charges figure (OCFs) adds the AMC and all the other costs and charges of the fund but does not take into account initial charges, exit costs or certain fund expenses, such as dealing costs. The OCF is expressed as a percentage of the AUM and is typically between 1% and 2%. Many costs are monetary amounts, so OCFs are often lower for larger funds. The OCF is the most commonly used method of comparing ongoing charges incurred by investors.
- **Performance fees.** An increasing minority of funds levy performance fees. Usually they apply to the incremental performance above a set threshold, which may be the benchmark index (e.g. the FTSE 100 Index) or, in the case of absolute return funds, a margin above London Interbank Offered Rate (LIBOR); e.g. 'LIBOR plus 5%'.
- **Total cost of ownership (TCO).** The true cost of an investment to the client including the cost of the service, the product, any third party charge and any transaction that may affect the total return.

Each of these charges may be used as a filter in fund selection.

Other costs that investors incur in funds are:

- **Initial charge.** Formerly, initial charges ranged up to 5%, but most managers today offer funds at no initial charge through platforms.
- **Bid-offer spread.** Dual-priced funds (such as most unit trusts) quote two prices, and the spread between the two represents a cost to the investor. Even when no initial charge is levied, the creation price of units or shares is usually above the redemption price.
- **Stamp duty.** UK-authorized funds incur stamp duty on UK share purchases at a rate of 0.5%. Fund managers do not have to pay stamp duty reserve tax (SDRT) when investors surrender their units in UK unit trust schemes or shares in a UK open-ended investment company (OEIC).
- **Turnover.** Each purchase and sale of securities incurs transaction costs. The higher the portfolio turnover rate (PTR), the greater the costs incurred by investors. A few funds have low PTRs of 20% or less, but the majority fall in the 50% to 100% range, with highly active funds incurring higher rates. The actual costs are highest for equity funds since transaction costs in bonds and derivatives are generally lower, although bid-offer spreads in corporate bonds may be higher than for blue chip equities.

F3 Strength and reputation of management group

The regulation of UK-authorized funds means that investors incur no risk of monetary loss if a

management group fails, since independent custodians hold the assets.

However, the financial strength of a management group does have implications for investors. A weakly capitalised or over-indebted management group may have difficulty retaining investment managers. Star fund managers in small management firms often receive a significant part of their remuneration in the form of equity in the business.

A large group with upwards of £50 billion in assets will probably have sufficient cash flow from its AMC to survive a severe market downturn, whereas fixed costs are likely to represent a higher proportion of a smaller group's revenues.



Consider this...

Reputation is based not just on performance but also on consistency in strategy. Groups that opportunistically launch fashionable funds to attract AUM are likely to suffer reputational damage.

F4 Skill and reputation of individual fund manager

In the case of actively managed funds, the skills of one or more key managers are a key consideration. Often managers will have specialised in a particular area for many years, and most analysts believe that such skills are not easily transferable, especially in areas such as natural resources, technology, absolute return strategies and high-yield credit markets.

From an investor's perspective, the longer a successful manager remains in place, the better. Advisers may take the view that the manager is all-important and that if they leave, the adviser will recommend a sale of the fund, or may seek funds where the management group has other managers who can take over the management using 'team' processes.

The aim is to identify managers who can provide the best performance consistent with the defined investment objective and tolerance to risk. However, it is important to realise the following points:

- past performance is not necessarily a reliable guide to the future, but the use of past performance statistics can be an indication of possible future performance, provided it is clear how that past performance was achieved;
- past performance should be considered over a variety of periods with the aim of identifying consistency;
- volatility of performance will provide an indication of the level of risk employed; and
- investors should identify whether the individuals and methods responsible for past good performance are still present in the particular investment management group.

A number of criteria need to be considered in addition to past performance when choosing an investment manager.

The following is suggested as a list of additional criteria that most practitioners would use:

- relevant experience – the investment manager's experience should match the form of investment and the particular investment objectives. For example:
 - a large segregated pension fund looking for discretionary management would review investment

- houses operating in that particular area; and
- a portfolio manager creating a unit trust or OEIC investing in a new emerging market, where no such funds have previously existed, would look for managers with general emerging market experience and preferably some in the specific market or a similar market;
- structure and style of investment – there can be wide variations in management style and therefore performance:
 - most investment managers now have a strong central or house policy, with strong internal controls on individual managers. This controlled approach has been encouraged by a court case in which a pension fund trustee sued an investment manager who had produced widely differing results for their clients from portfolios with identical remits; and
 - a few houses promote a relatively individualistic style where performance can depend much more on the individual manager assigned to the portfolio than any house style or view;



Assessing house style

One way to assess the house style is to look for a spread of investment returns achieved from similar portfolios or collective investment vehicles. A wide spread of results may suggest that the investment manager does not impose a strong house view and that individual managers are given more than usual discretion.

- size, access to relevant resources – the choice of an investment manager may depend to some extent on the size of their funds under management. There is a view that an investment manager needs a certain critical mass to ensure access to relevant resources and research:
 - many of the necessary resources can be outsourced and research can be supplied by external providers; and
 - smaller investment managers may be vulnerable if markets turn down significantly and their income falls sharply, because it is usually related to funds under management. Having said that, smaller houses may be able to provide specialist services or products that are not available from some larger companies;
- quality of staff and their stability – staff stability generally has been a vital part of past good performance for many investment managers. A stable team is likely to have a better chance of outperforming than an unsettled one;
- administration – increasingly clients expect a first-class administration service. The quality and clarity of investment reports, portfolio valuation and easy access to information are important aspects of the overall service offered by investment managers;
- costs – cost differences between managers are often considered to be minor issues in relation to differences of investment performance, as long as the charges are perceived as reasonable. However, in a low return/low inflation environment, costs become a much greater issue. For some types of investment, cost is more significant in the decision-making process. For instance, if an investment manager provides an index-tracking service, the differences in initial (if any) and AMC may be significant;
- past performance – there is little evidence that the average active manager outperforms benchmarks. This has contributed to the growing popularity of index funds to gain exposure to markets. A drawback of index trackers is that many investors do not realise or wish to accept the full market risk (you will recall that the beta of the market is 1) in return for the market return. There is also mixed evidence on the consistency of performance. If performance is not consistent it means that a fund that performs well in one period is no more likely to perform well in the next period than any other fund. Much marketing of investment funds chooses to ignore the fact that ‘past performance is not a guide to the future’, which is an important health warning. The examination and interpretation of

performance statistics is fraught with difficulties and traps for the unwary. For example:

- **If performance is good over the previous twelve months**, this can hide previous poor performance in cumulative statistics. Discrete year-by-year performance is a more valuable guide, and is an actual requirement of the Financial Conduct Authority (FCA) when performance is mentioned in an advertisement.
- **Classification issues.** Funds may not always be classified in the relevant sector, so a fund can boast top quartile performance without necessarily being compared with its true peers.
- **Funds and sectors change**, with the result that long-term performance may reflect a different set of fund investment aims to those current.
- **The measurement of returns alone ignores risk.** A manager could achieve sector-topping performance by adopting a much higher-risk profile than their peers. It is important to consider risk-adjusted performance measures.
- **Some specialist funds end up in ‘rag bag’ sectors, because there are not enough comparable funds.** Heading such a sector can be more to do with what the markets favour than the investment expertise (e.g. Korean stocks).

Measuring performance is discussed in [chapter 9](#).

F5 Type and structure of fund

Certain types of fund may be more or less suitable for portfolios depending on the risk profile. Among the relevant factors are:

- **Open-ended or closed-ended.** Open-ended funds that always trade at net asset value (NAV) are less volatile than closed-end funds where the premium or discount to NAV can change. Closed-end funds are generally more appropriate for illiquid asset classes, since it may not be possible either to price illiquid assets with any degree of precision or to sell them in the volumes that might be necessary to meet redemptions in an open-ended fund.
- **Gearing or leverage.** Many closed-end funds have borrowings, which potentially add to returns but also increase volatility.
- **Multi-manager and fund of funds.** These funds assemble portfolios of funds, reducing the adviser’s work in fund selection. Fund of fund portfolios may be narrow (e.g. UK equity income, European equity), global or risk-rated (e.g. Cautious, Growth).



Consider this...

Advisers recommending fund of fund or multi-manager funds need to research similar funds to justify their recommendations. If a fund of fund is given a risk rating, the adviser needs to check how this relates to their own risk profiles allocated to clients.

F6 Passively managed funds

An alternative to the use of actively managed funds to implement an asset allocation strategy is to use passive funds that simply replicate the performance of an index representing the chosen asset class. For almost all major asset classes and sub-classes, there are now index tracker funds, often in the form of ETFs as well as OEICs.

While some passive funds have low charges, cost is not the principal issue. Rather, the key advantage of such funds is that they eliminate the possibility of returns diverging from those of the chosen index. Their

prime advantage is to limit the volatility of a portfolio as compared with a portfolio of actively managed funds.

The two key aspects of passive fund selection are index selection and structure:

- **Index selection.** For most asset classes, several indices are available. In some cases, the differences are slight but in others, they are large and have had major effects on returns. Especially for specialised asset classes (such as high-yield bonds or private equity) the choice of index is critical and the adviser needs to understand the index methodology.
- **Structure.** Passive funds may take the form of investment trusts, OEICs or ETFs. ETFs may be ‘physical’, in which case they hold stocks to replicate an index, or ‘synthetic’, in which case they use derivatives to match an index. Advisers need to understand the advantages and drawbacks of these structures.

F7 Socially responsible investing (SRI) and ethical fund selection

For some clients it is important that the funds are selected for their ethical or SRI criteria (for further detail please see [chapter 7](#)).

G Selection of tax wrappers

The decision about which tax wrappers to use should be made in the light of the asset allocation and fund selection. Choosing the right tax wrapper should be based on two main factors: first the client’s individual tax and financial circumstances, and second the underlying assets to be held in the tax wrapper.

The main wrappers under consideration are:

- collective investments, such as open-ended investment companies (OEICs) and unit trusts;
- Individual savings accounts (ISAs);
- personal pensions/self-invested personal pensions (SIPPs);
- UK life assurance bonds; and
- offshore life assurance bonds.



Other options available

In addition, some clients may wish to consider enterprise investment schemes (EISs), venture capital trusts (VCTs) and seed enterprise investment schemes (SEISs).

G1 Client’s circumstances

The client’s current (and likely future) tax position is a critical factor in decisions about the suitability of different tax wrappers:

- Investors who pay 40% or 45% tax on their investment income will gain relatively more from tax relief on pension contributions and from the tax-free roll-up of income within pension funds and ISAs than basic-rate taxpayers. Likewise, the few investors who pay capital gains tax (CGT) on a regular basis because of the size of their portfolios will gain relatively more from wrappers that

provide tax-free roll-up of gains.

- It is also necessary to consider the client's probable future circumstances in relation to their current position. An investment wrapper may offer the opportunity to shelter income while an investor is subject to the higher rates of tax, and then to tax the proceeds at a time when the client may be subject to the basic rate. For example, those with incomes of £150,000 or more who are subject to 45% income tax, could find some wrappers provide them with a helpful tax shelter.
- Any extra costs should be taken into account. Some tax wrappers, such as ISAs, often involve little or no additional costs, but life assurance bonds and pensions usually require the payment of additional fees and there can be substantial differences between different providers.
- Additional complexity and inflexibility are other factors to be taken into account in deciding on particular tax wrappers. ISAs are cheap, simple and flexible, but they cannot be held in a trust. Despite the recent changes to flexibility, pensions are complex; access to them is restricted until a certain age, they are subject to rules that constantly change and costs are typically higher than for other wrappers.

G2 Asset allocation across tax wrappers

Many tax wrappers have a greater impact on the returns from rolled-up income than from capital gains, especially for 40% and 45% taxpayers. For example, in an ISA, the tax saving on capital gains is a maximum of 20% of the gain, whereas for income the tax saving is worth up to 40% or 45%. The tax savings on non-dividend income is greater than the tax savings on dividends from equities.

G3 Gains

Where an investment generates gains, it is generally more advantageous to hold it so that the gains are subject to CGT rather than income tax. The annual exempt amount is relatively high (£11,300 in 2017/18), losses are often easier to offset against gains and the rates are lower, especially for higher-rate and additional-rate taxpayers.

G4 Planning with tax wrappers

The main issues in deciding which tax wrappers are appropriate are as follows.

Table 8.5: Planning with tax wrappers

Collectives	<ul style="list-style-type: none">• Most clients are likely to find that collectives are the most tax efficient and simple way to hold equity-based investments. Dividends are taxed in the usual way and gains are subject to CGT when the units or shares are disposed of rather than when individual securities within the fund are sold. This freedom from tax on gains within funds makes collectives a convenient CGT tax shelter. Collectives can be held by other tax wrappers.• Fund of funds allow portfolios of different mutual funds to be actively managed without incurring a CGT charge. This is theoretically attractive, but small investors generally find that the annual exempt amount covers their gains, while larger investors often look for a more bespoke service. There is also a degree of double charging.
ISAs	<ul style="list-style-type: none">• ISAs can hold collectives or direct investments in shares, fixed-interest securities or cash.• The income is tax-free. Capital gains are also tax-free, although the potential tax saving is somewhat less than

- for income, especially for higher- and additional-rate taxpayers. For a basic-rate taxpayer who is unlikely to pay CGT, an ISA provides relatively little benefit in comparison with a direct holding of collective funds.
- The main advantages are that it is not necessary to make a return of the income or gains to HMRC and that the investor's circumstances may change, and they could become liable to higher-rate tax or CGT.
 - One limitation is that there is an annual limit on ISA investment, which means it can take a number of years to transfer some investors' wealth across. It makes sense to ensure that investors' ISAs can be transferred from one provider to another without loss of the tax benefits, so ensuring relatively little risk in adviser selection.
 - A few providers do not allow in specie transfers – in which case investments have to be sold before transfer and then repurchased afterwards, possibly leading to delay and being un-invested for several weeks.

Personal pensions/SIPPs

- The main issue with investing in a pension has been whether the tax advantages compensate for the additional costs, inflexibility and complexity of investing within a registered pension.
- The greatest benefits arise where the investor is a higher-rate or additional-rate taxpayer in the years of contribution and build-up of the funds, but a basic-rate taxpayer in the years of drawing benefits. There is also the advantage of the tax-free pension commencement lump sum. Since April 2015, investors aged 55 and over have been able to draw down freely from remaining funds, subject to their marginal rate of income tax.
- The differences between personal pensions and SIPPs have blurred in recent years.
- Many personal pensions offer access to third party managers and this may be adequate if the client does not require the wider range of options available from a SIPP. Equally, the costs of having a SIPP have fallen considerably with some providers and may be less than some insured personal pensions.
- An important consideration when choosing a personal pension provider and (even more) a SIPP provider is the efficiency of the administration systems.

UK life assurance bonds

- The underlying fund within a UK life assurance bond is subject to UK tax at rates that are very similar to those paid by basic-rate tax payers. However, unlike most basic-rate taxpaying investors, the funds suffer a deduction for tax on capital gains.
- UK life policies are relatively more attractive to higher- or additional-rate taxpaying investors where the underlying investments generate income rather than capital growth. The 5% withdrawal facility can be particularly attractive for higher- and additional-rate taxpayers who need income.
- The tax shelter characteristics of the life assurance bond can be maximised if it can be arranged for the investor to be a basic-rate taxpayer in the year of encashment. Top slicing relief may help to ensure this can be achieved where the investor has held the bond for a number of years. Top slicing relief is available to basic-rate taxpayers who are pushed into the higher rates of tax by a gain.
- Where the investor is a higher-rate taxpayer, the fact that the gain on the bond is not grossed up for the basic-rate tax credit reduces the total effective rate of tax on the gain below 40% or 45%.
- It is possible to gift bonds to trustees or other individuals without triggering a tax charge; in contrast, the gift of an asset that is subject to CGT does trigger a tax charge. Bonds are generally advantageous for trustees to hold.
- Qualifying life policies (maximum investment plans) can be used to accumulate funds that are free of higher-rate tax after ten years of regular contributions. The drawbacks are the inflexibility of the investment in the build-up period, although tax-free access is possible after three quarters of the premium paying term has elapsed – in practice, after seven and a half years from inception. The maximum contribution into these schemes is capped at £3,600 per year.

Offshore bonds

- An offshore bond has many of the characteristics of a UK bond. The main differences are that the fund is not subject to UK tax and so the fund should grow more than the equivalent UK life fund, although this may be more than offset by the tax at encashment (when there is no tax credit for the insurance company's rate of tax on income and gains).
- As a result, the net returns from offshore bonds for taxpayers tend to be lower than for onshore bonds, whereas offshore bonds tend to be worthwhile for those who could reasonably expect to be non-taxpayers, e.g. by becoming non-resident.
- Offshore bonds can involve higher charges than UK bonds, although this is not always the case.

VCTs, EISs and SEISs

- The tax benefits that arise from investing in VCTs, EISs and SEISs need to be weighed up against the requirement for the underlying investments to be in small and relatively risky, illiquid assets.

H Platforms

Since the introduction of platforms in the UK, the value of funds held and the number of providers offering these accounts has continued to grow.

In simple terms, an administrative platform is one that allows clients to consolidate their investment arrangements and manage these in one place. It is a service rather than a product and includes the following features:

- A single fee across all accounts and transparency on costs.
- Reduced paperwork and simplified administration.
- A wide choice of investment funds, often including investment trusts, ETFs and listed structured products.
- Access to tax wrappers including ISAs, SIPPs, offshore and onshore investment bonds, with no or low charges.
- Asset allocation across tax wrappers.
- Consolidated valuations, income and gains statements.
- Access to online valuations.
- Adviser fees deductible from cash accounts.
- Automatic re-balancing of portfolios.

Other features of platforms are included in Table 8.6:

Reduced paperwork and administration	<ul style="list-style-type: none"> • Consolidating investments into a single account or platform means reduced administration for advisers and less paperwork for clients. • Transferring assets on to or off a platform is usually quite straightforward and in some cases may be done 'in-specie'. • Consolidated transaction summaries can also be produced quickly, avoiding the need to collate statements from various providers who may all use different formats to present the same information.
Choice of funds	<ul style="list-style-type: none"> • Most platforms offer access to the vast majority of UK-authorized funds, and may also provide a share-dealing account for purchasing investment trusts and ETFs. • Some advisers use their own back-office administration system as an alternative to a platform. Here, the adviser collates information on all of the clients' plans and investments onto a database, combines it with a live price feed, and then uploads the information on to a secure website for the client to access. Consolidated valuations and transactional information can then be provided on demand. • Some of the larger independent financial adviser (IFA) firms have already adapted their in-house administration systems to support such a service. Although there are fewer back-office systems capable of delivering 'platform style' services for smaller IFAs, these may prove to be suitable for firms who offer restricted advice.
Tax wrappers	<ul style="list-style-type: none"> • The majority of platforms provide access to ISAs, pensions, onshore bonds and offshore bonds. These are in addition to the general investment and cash accounts, which do not have any associated tax benefits. • In most cases, there is no charge for the ISA wrapper; however, additional charges may apply to the others. • The onshore/offshore bonds and pension wrappers may also lack some of the features of standalone products e.g. capital or income protection mechanisms. • The same range of funds and investments is usually accessible throughout all of the tax wrappers and existing tax wrappers may be transferred onto the platform e.g. ISAs, SIPPs as cash transfers or 'in-

specie’.

Allocation across tax wrappers

- A platform enables advisers to implement asset allocation strategies across several tax wrappers and to present the results as one consolidated portfolio.
- Where, for reasons of tax efficiency, the adviser recommends the allocation of all capital in an ISA to fixed-interest investments, and all capital in an onshore bond to equities, the client can have difficulty in seeing the overall picture if they receive separate statements and valuations.
- On a platform, their consolidated valuation will show their total capital and its allocation to the asset classes, with the allocation of capital in the wrappers shown separately. This helps the client to distinguish between the vehicles through which capital is held and the investments within them.

Consolidated statements

- There will be a cash account, providing transparency on all cash flows.
- Separate consolidated statements for income and gains help to distinguish between those from tax-exempt sources and those that are potentially liable to tax.
- Statements and valuations can also be generated by the adviser or the client at any time.

Portfolio rebalancing

- Some platforms provide a service where portfolios are automatically rebalanced against a target asset allocation and at an agreed frequency.
- This helps to minimise risk and ensure that the portfolio remains closely aligned to the asset mix that was discussed and agreed at the outset.

Holding all investments on a platform creates benefits for both clients and advisers. Advisers gain an improved perspective on the client’s portfolio, making holistic financial planning easier, while clients are able to access valuations and consolidated tax statements on demand. The administrative overhead associated with managing a diverse portfolio of investments across many different providers and tax wrappers is significantly reduced, enabling advisers to offer a more streamlined, cost efficient, and transparent service to their clients. Some providers have also developed tools on their website that enable clients to model their portfolio, carry out goal planning, and project the future value of the portfolio based on various assumptions.

H1 Administration fees and transparency

Since 6 April 2014, cash rebates from product providers have not been allowed and platform services must only be paid for by an explicit charge agreed with the consumer, with some limited exceptions, under rules introduced by the FCA to improve remuneration transparency and to help consumers compare platform services.

Platforms were given two years to move existing customers to the new explicit charging model and from the end of the two-year transitional period (which ended on 6 April 2016) must charge their customers a platform charge for both new and existing business.

One of the exceptions is that providers can pay cash rebates to the platform provider, if the rebate is passed on to the customer in full in the form of additional units.

I Discretionary management services

The adviser may, as part of their investment proposition, recommend the placement of all or part of a client's capital with a third-party, discretionary-management service.

Such services may be general portfolio management, or specialised services in venture capital or 'alternative' assets such as forestry. In some cases, the audited historic returns that are available for collective funds may not exist. Often managers provide samples of client portfolios to illustrate historic returns. Care must be taken in evaluating this data and establishing exactly what is being reported and how well this matches what clients are currently being offered.

Advisers also need to ensure that the discretionary manager's risk profiles correspond to their own, or are matched in such a way as to ensure clients do not end up incurring more risk than the adviser has assessed as acceptable.



Tax management

Tax management is a key issue in discretionary services, since if assets are held in the client's name (i.e. not within a tax wrapper), then the manager's actions can trigger CGT liabilities. Good communication between the adviser, discretionary manager and client is essential.

J Provider selection issues

Where advisers are selecting UK providers of regulated investment products, the regulatory and supervisory framework should ensure that their capital is not at risk from fraud or theft. However, while this is generally true, there have been instances of products that incurred losses despite apparently having strong institutional backing.

Since most of these occurred 'out of the blue', conventional assessments of credit risk ratings and balance sheet strength of providers may be insufficient.

A key question is: 'What would happen to the client's money if X went bust?' The issue is often the way the assets are held. In the case of authorised funds, an independent custodian holds the underlying assets, so there is no risk if the fund manager fails. But if the client holds funds through a third party service (a platform, for example), then a relevant question is, what would happen if this third party went bust? An important aspect of due diligence in product selection is ensuring that, as far as possible, the provider has insulated clients from any adverse consequences of its own financial problems.

K Recommendations and suitability

Advisers using asset allocation methods will start their recommendations by explaining the client's risk profile based on assessments of risk tolerance and risk capacity, and how it has been used to generate the asset allocation and the recommended portfolio. This top-level introduction focuses on timescale (including access to capital), returns (income where this is a factor) and risk. It should indicate the range of expected returns and volatility over the given timeframe, with appropriate caveats about circumstances in which these expectations may not be met.

The following topics should then be covered:

- The method of selection of funds within the various asset classes – why the adviser has selected

- active/passive funds, open/closed funds or fund of funds in each category.
- Summaries of the most important features of the funds recommended, with fund fact sheets provided as appendices.
- Explanation of the choice of tax wrappers and/or platform.
- The frequency of review and the basis of ongoing advice and recommendations.
- The costs of the service – initial and ongoing.

L Portfolio reviews

The investment policy statement is a critical element in the portfolio review process. It is formulated when a new client is taken on and then must be updated on a regular basis.

L1 Investment policy statement

The FCA requires authorised organisations to agree investment objectives with their clients. These objectives and principal factors or constraints on how the portfolio will be managed (for example, legal constraints and the tax position of the client) will be set out in the investment policy statement.

The investment manager may have a general house style regarding the acceptable level of risk that the fund would generally incur. For instance, some managers may have a general policy not to deal in derivatives, or not to encourage clients to gear their portfolios by borrowing.

The investment manager must establish clients' overall investment objectives and attitude to investment risk. These should be agreed in writing and would apply until they are amended by discussion and again confirmed in writing.

In very general terms, the overall investment objective may be classified as follows:

Overall investment objective	Explanation
Capital growth priority	Income requirements are not a prime concern and emphasis should be placed on investments considered to have longer-term growth potential.
Income priority	Income considerations will be given priority over the long-term prospects for capital growth. This could result in the erosion of purchasing power of the capital.
Balance between capital growth and income	A combination of capital growth and income investments, designed to produce growth in both capital and income.

Examples of classification of risk are shown below:

Risk classification	Explanation

Lower or secure	Investments would usually mainly comprise cash, gilts and fixed-interest securities with a credit rating of at least A.
Medium or balanced	In addition to those included in lower or secure risk, investments might include larger UK companies, as well as larger overseas listed companies and unit trusts, OEICs and investment trusts. The portfolio could also hold a proportion of the assets in medium-sized or smaller UK companies, and have exposure to international markets.
Higher or adventurous	In addition to medium or balanced risk, investments might include a greater exposure to more volatile markets, smaller companies and more speculative investments such as securities without an official listing, with the objective of achieving higher than normal capital and/or income returns. Alternative investments might also be included. This policy would inevitably involve higher risks.

L2 Principal factors affecting investment strategy

A number of important factors can affect investment strategy and these should be reflected in the overall investment objectives and level of risk agreed with the investment manager.

L2A Legal constraints

Any legal constraints should be clearly explained and identified. Limitations are most likely to arise where the investment portfolio is being managed for trustees. For instance:

- Most modern trust deeds contain wide powers of investment. The nature of the trust and its liabilities will be the principal factors affecting investment strategy.
- Where a trust deed has no specific investment powers, the **Trustee Act 2000** allows trustees of trusts established in England and Wales to invest monies as if they were their own, provided they have regard to the standard investment criteria of suitability and diversification. Similar provisions also apply to trusts created in Northern Ireland and Scotland.

L2B Nature of liabilities

This consideration is particularly relevant to defined benefit (DB) pension funds where their liabilities are very long term. A typical new member may join at the age of 30, may retire at 60, draw a pension until age 85 and then die, leaving a surviving spouse who draws a further pension for perhaps another five years – a grand total of 60 years.

During these long periods there are likely to be many important developments affecting members:

- There could be significant **price inflation**.
- **Salary rates have usually risen faster than prices**. For DB pension schemes, which have benefits linked to final salaries, the liabilities may increase dramatically. For a pension fund to remain viable during any long period of inflation, its assets must be of a suitable type. In particular, the assets must stand a good chance of increasing in value at a rate at least as fast as the rate of increase in salaries. For this reason, it has long been held that pension funds should have a high exposure to real assets,

such as equities and property, although inflation risk can be more accurately hedged by using index-linked bonds or inflation swaps.

L2C Cash flow

A further influence on investment strategy is whether the portfolio will enjoy **positive cash flows**. With a strong positive cash flow, the manager can:

- take a long-term view of certain types of investment;
- accept short-term uncertainty, or even short-term capital losses, in the expectation of better long-term profits.

L2D Taxation

Pension funds are exempt from income tax and CGT. Provided the fund has a strong cash flow, the investment manager can therefore invest for growth as well as income. The aim will be to choose investments that will produce the overall best return and best meet future liabilities. It will not be necessary to consider the effect of tax either on investment or dividend income or capital gains on realised gains.

L3 Reviewing the investment policy statement

The importance of reviewing the investment policy statement on a regular basis cannot be over-emphasised.



Investment policy statement

The policy statement may need to be revised as a result of changes in client circumstances, regulations and taxation and the market environment.

L3A Client circumstances

In the case of a private client there will be a number of circumstances that can lead to major changes in their objectives and the constraints. These include:

- inheritance;
- illness;
- marriage;
- divorce; and
- change in employment, redundancy or retirement.

More generally as a private client gets older and approaches retirement there will usually be a need to take less risk and focus on income rather than capital gains. Typically, this involves moving a portfolio away from equity investments and increasing the weighting in fixed-income investments.

L3B Regulation and taxation

Regulations affecting the investments of different client types are subject to change. More frequently there will be tax changes that may significantly alter the preference for capital gains versus income, or impact on the tax status of different trust structures, products and asset classes.

L3C Market environment

Although one would not expect investor objectives and long-term strategies to be changing in response to short-term market changes there will inevitably need to be a reassessment of strategies in light of longer term changes in market environment. The risks of individual asset classes and the relationship between different asset classes will alter over time. New asset classes will also become accessible to private client investors.

L4 New products and services

In response to regulatory and tax changes there is a constant stream of new products and services becoming available. Many of these will be complex and require analysis. This puts heavy demand on investment advisers who may not have the time or necessary skills to analyse products. In this case, rather than simply ignoring new products that may be beneficial to their clients the adviser should look at using third party advice or external services to assist in deciding whether they are appropriate investments.

L5 Client reporting

Providing regular reports to clients allows the client to engage in the review process.

The means and frequency of client reporting will usually be contained in the Terms of Business letter given to clients; otherwise, it should be agreed in writing between the investment manager and the client.

The principal items reported by investment managers are typically as follows:

- purchases and sales;
- summary portfolio valuation and cash statements showing income, interest received, dividends collected and cash outflows;
- general market commentary and calculated investment return earned by the portfolio compared with the appropriate and agreed market indices or other benchmarks; and
- recommended changes in investment strategy.



Timing and frequency of reports

The timing and frequency of these reports would be specified and are usually at quarterly or half-yearly intervals, except for purchases and sales, which are reported on an ongoing basis along with a letter of explanation for discretionary clients.

Contract notes

With all forms of investment management, contract notes should be prepared and dispatched immediately after each purchase and sale. The contract note usually gives the following information:

- bargain date;
- person for whom the purchase was made;

- number of shares bought/sold, and the price;
- full name of share or stock;
- amount of charges, including stamp duty; and
- settlement date.

Summary portfolio valuation

A summary portfolio valuation will be issued at agreed intervals, usually quarterly or half-yearly. Typically, the summary valuation shows:

- portfolio value at the date of the last report;
- addition of cash or stock;
- reduction by each withdrawal;
- appreciation or depreciation;
- new portfolio value and date of the report.

Details of holdings

Individual holdings will be itemised and the following will usually be provided:

- holding and description;
- market price and value;
- book or acquisition cost; and
- gross income and dividend yield.

Other reports vary, depending on the nature of the investment service and the reporting basis agreed with individual clients.

L6 Rebalancing portfolios

Rebalancing portfolios will often result from the portfolio review process. Transactions may result from a change in asset allocation or a change in securities held within an asset class. A switch of investments arises when a new investment is effected as a result of a full or partial encashment of an existing investment:

- A churn is a switch of investments where the primary aim is to generate income for the benefit of the firm, rather than to act in the best interests of the client. This clearly breaks the FCA Conduct of Business rules.
- An investment that is genuinely underperforming should be replaced if a switch can be demonstrated to be in the best interests of the client, after taking into account the transaction and any tax costs of the switch.

L6A Reasons for switching

A justifiable switch generally arises in one or more of the following circumstances, i.e. where:

- there has been a clear change in the client's objectives or circumstances that necessitates a move to investments with less or more risk exposure or a change in yield;

- market conditions adversely affect the original investment or weigh in favour of an alternative investment;
- the client gives clear instructions to effect a switch;
- there has been consistent underperformance of an investment over a medium to long period; or
- the value of an investment is returned as part of a takeover or capital restructuring.

L6B Tax issues on switches

There could well be a tax penalty involved in disposing of an investment. In the case of a property, collective investment or shares, this could be a CGT charge.

- It may be possible to reduce or eliminate this potential charge by passing some of the assets to the investor's spouse/civil partner before making a disposal, if he or she has not used their annual exempt amount. However, with a substantial gain, there may be no way to avoid paying CGT. Alternatively, the gain may be offset against other realised losses.
- If CGT cannot be avoided, it may not be worth incurring the tax charge to make the switch. A low charge in relation to the sale proceeds will make the decision easier. Much will also depend on the quality of the investments to be replaced:
 - If the investment is a single shareholding in a company and constitutes a high proportion of the client's wealth, the high level of risk inherent in this lack of diversification could make the switch essential, despite the tax cost. Switching would be especially appropriate for a cautious investor.
 - The decision is much more finely balanced if the investment is a collective investment, such as a unit trust or investment trust, which has not performed adequately.



Key points

The main ideas covered in this chapter can be summarised as follows:

The main approaches to asset allocation

- Asset allocation is primarily a defensive methodology concerned with capital preservation, which is achieved through diversification of capital across asset classes.
 - This type of diversification can be applied in a pragmatic way, where the practitioner uses historic data only as a reference point and bases allocation mainly on judgments about the future.
 - Today most practitioners use the theoretical apparatus derived from MPT to a greater or lesser extent. Historic data for returns, volatility and correlation are used to create optimised portfolios which, in theory, will deliver the greatest return for a given level of risk or the least risk for a given rate of return.
 - The high volatility experienced in 2008/09 – far higher than predicted by MPT models – has resulted in practitioners making more adjustments to optimisation processes. In particular, mean-reversion is often used to adjust expected returns and volatility.
 - Within each asset class, the practitioner can select investments that embody greater or lesser risk and return than the average for the asset class. Portfolios with the same percentages of capital allocated to each asset class, but which contain different sub-classes of assets, can have very different characteristics.

Portfolio optimisation

- Optimisation uses stochastic modelling to generate a large number of portfolios with different allocations of capital to the same assets or asset classes. It is assumed that returns and volatility of assets are affected in specific ways by changes in a number of variables, such as interest rates and inflation. Portfolios that generate the best returns within a volatility range corresponding to the investor's risk profile are optimal.
 - Stochastic models are highly sensitive to changes in inputs. Small changes in variables may generate large changes in the range of returns and volatility in the outputs. Practitioners using such models therefore need to fully understand the model's rule base and the effects of such variations.

Strategic and tactical asset allocation

- Strategic asset allocation matches the client's risk profile with a set of assets, which are appropriate in relation to their risk profile and are intended to be maintained for the long term.
- Tactical asset allocation applies judgment to the allocation of capital to asset classes and the investments within them. Tactical allocations are usually reviewed more regularly than strategic allocations, often monthly.
 - In one form of tactical allocation, the strategic allocation to an asset class is a band rather than a precise figure, for example, the allocation to equities may be 60% to 70%. The tactical decision is what figure within that range to hold at any point in time.
 - Another form of tactical allocation is to allocate only, say, 80% of the portfolio on a strategic basis and to use the remaining 20% opportunistically to add to selected asset classes.
 - Since MPT claims that it is not possible to make consistent profits from market timing, an active tactical allocation approach is not consistent with the methodology of MPT.

Alignment with client objectives

- The first step in creating a portfolio that is aligned with the client's objectives, risk tolerance, risk capacity and timescale is to generate an appropriate risk profile. This will usually specify the targeted range of returns and likely volatility over the relevant timescale.

Portfolio construction

- The two principal methods used in portfolio construction are the 'top down method', driven by economic analysis, and the 'bottom-up method', driven by stock selection.
- In top-down methodology, the initial decision is the allocation of capital to asset classes and sub-asset classes. This is followed by a geographic allocation; then, within the selected countries or regions capital is allocated to business sectors. Selection of stocks within those sectors is the final stage of the process.
 - Funds managed by the top-down method usually pay close attention to their benchmark index and often limit deviations from the index allocation more narrowly than funds managed by the bottom-up method. Bottom-up managers may explicitly state that a wide divergence between the fund and its most relevant index is to be expected.
- In bottom-up methodology, the fund manager simply searches for stocks meeting the fund's criteria as defined by its objectives and constraints. Such constraints may limit the percentage of the fund's capital that may be allocated to countries, regions or sectors.
 - Funds using the bottom-up method can be expected to be more volatile than those using the top-down method.
- In practice many fund managers combine both methods and it may not be clear from fund managers' promotional material which discipline predominates. The extent to which fund managers actively select sectors and stocks and therefore diverge from index benchmarks can be assessed by analysis of their performance.

Fund selection

- Many factors may be used in the process of fund selection. Commonly used factors are:
 - **Objective.** Often, the number of funds sharing a similar objective is quite small (e.g. funds investing in small-cap European equities for capital growth).
 - **Style.** Fund managers may use one or a combination of styles, the main ones being Value, GAARP, Momentum and Contrarian. Each can be expected to influence the pattern of returns and volatility.
 - **Costs.** The most important costs for the investors are the annual management charge, the OCF, the portfolio turnover rate and any performance fee.
 - **Strength and reputation.** Large well-resourced fund management groups do not always produce the best fund performance. But smaller groups involve risks deriving from their business model.
 - **Manager skill.** The contribution of the individual manager to returns will vary according to the methodology of the management group. In some cases, a team approach predominates, while at the other extreme star managers have considerable autonomy.
 - **Type.** Closed-end funds may be more appropriate for investing in less liquid asset classes, but open-ended funds are less volatile. Closed-end funds also may use gearing, adding to volatility. Funds may use UCITS powers to use derivatives, which can increase or reduce volatility. Fund of funds may limit the task of fund selection.
 - **Performance.** Advisers can use sophisticated tools and ratio analysis to identify funds that have generated above-average risk-adjusted returns.
 - **Index and structure.** For passively managed funds, selection of an appropriate index for the asset class or sub-class is critical, and both OEIC and ETF structures may have advantages.

Selection of tax wrappers

- The selection of tax wrappers is based on the client's financial and tax position and on the assets to be held within the wrappers.
- Higher-rate and additional-rate taxpayers benefit to a large extent from the tax-free roll-up of income within pension and ISA wrappers.
- Clients (whether higher-rate or basic-rate taxpayers) who may face capital gains tax liabilities at 20% or 10% respectively will also benefit to a greater extent from the tax exemption of gains within ISAs and pension funds.
- Those paying higher income tax rates now, who are confident they will pay lower tax rates in retirement, may benefit from the tax deferment possible with investment bonds.
- Limitations on access to cash may restrict the extent to which certain wrappers may be used, especially pension funds, but also investment bonds where withdrawals in excess of the 5% cumulative allowance could have adverse tax consequences.
- While the ISA wrapper often comes free of charge, any additional costs for other wrappers need to be taken into account.
- Pension and ISA tax wrappers deliver larger tax savings for higher-rate and additional-rate taxpayers in respect of income than of capital gains. This means that where a range of assets is to be held in several tax wrappers, the greatest tax savings will be achieved by holding income-generating investments in pensions and ISAs.
- Few investors regularly make gains in excess of their annual CGT exempt amount. For most people, holding assets whose main return is capital gain (most types of equities) directly in collectives and using wrappers to shelter income-generating investments is the most advantageous strategy.

Platforms

- The principal benefits of platforms are convenience and simplicity, both for the adviser and the client.
- The selection of a platform should take into account the administration features, fund availability, tax wrapper availability and cost. In addition, the platform provider's business model may need consideration if the provider does not already hold sufficient assets for the operation to be profitable.

Discretionary management services

- Advisers may recommend clients to a discretionary management service from a third party rather than offer advisory portfolio services.
- Selection of a discretionary management service requires the same due diligence as fund selection, with particular care in analysing past performance data.
- Good communication between adviser, client and discretionary manager is essential, especially in respect of transactions that may trigger CGT liabilities.

Provider selection issues

- Many investment clients will be placing sums in excess of the £50,000 covered by the Financial Services Compensation Scheme (FSCS) – please note that this is £85,000 for deposits. An important aspect of provider selection is therefore capital security in the event of the failure of a product provider.
- This is not an issue with the managers of UK-authorized funds since independent custodians hold the assets, but in other cases, the capital strength of the provider is an important factor.
- A key question is, ‘what would happen to the client’s assets if a provider failed?’

Recommendations and suitability

- Investment recommendations should start with an explanation of how the client’s risk profile has been generated, followed by an indication of the range of likely returns and volatility over selected timescales.
- The method of fund selection should be explained and specific reasons given for the selection of each fund in the portfolio.
- Recommendations for the use of tax wrappers should explain their benefits and the reasons for holding specific assets within them.
- Recommendations for platforms should clearly explain the costs as well as the benefits.
- The basis of and frequency of portfolio reviews should be covered.

Portfolio reviews

- The investment policy statement (IPS) is agreed between the fund manager and the client and sets out the client objectives in terms of risk and return as well as other issues including legal constraints, liabilities, and cash flow requirements from the portfolio.
- The IPS needs to be reviewed on a regular basis as client circumstances, regulations, tax and the market environment may change. New products and services may also become available.
- Client reporting will include contract notes, valuations and summaries of holdings.



Question answers

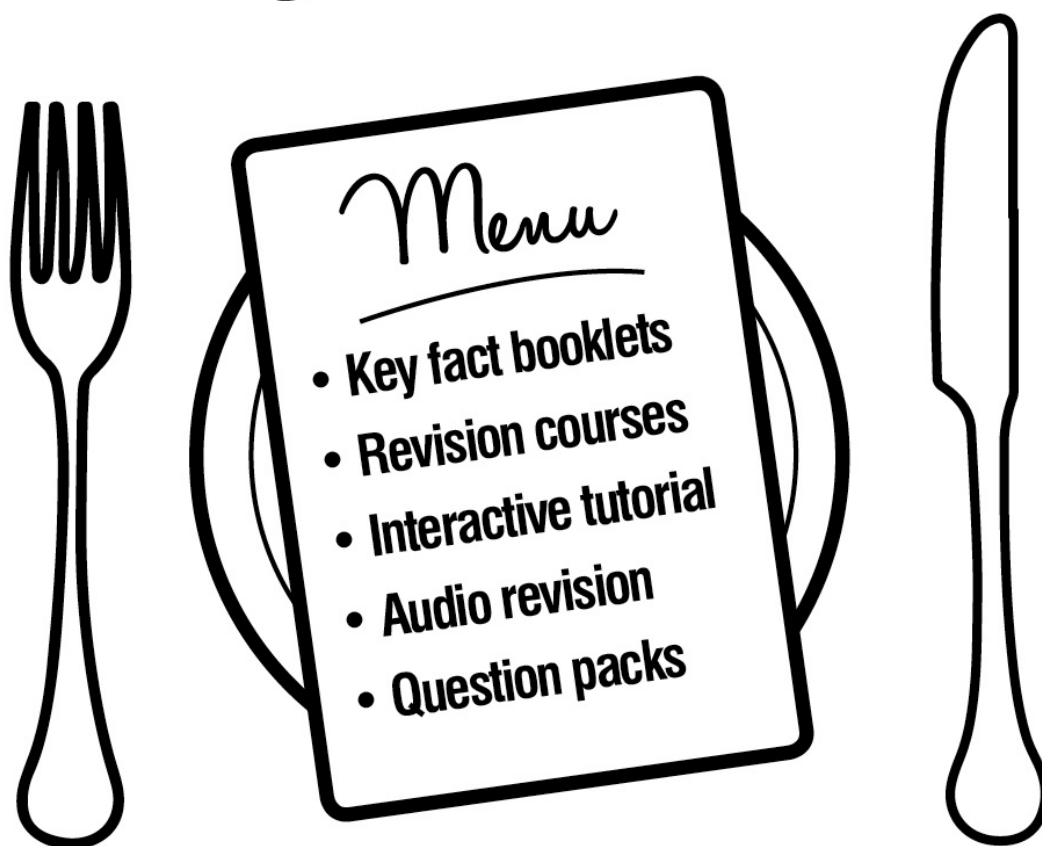


Self-test questions

1.	How can advisers apply asset allocation without the use of probabilistic statistical techniques?
2.	Why might a portfolio lying on the 'efficient frontier' deliver less than optimal performance over the next five years?
3.	Between which pair of asset classes would you expect the highest degree of correlation over any three-year period: A. cash and equities; B. gilts and equities; or C. cash and gilts.
4.	Which investment style is most commonly adopted by managers of UK equity income funds?
5.	For what reasons might an adviser decide not to use closed-end funds in a portfolio with a cautious risk profile?

You will find the answers at the back of the book

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9 The performance of investments

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Learning objectives

After studying this chapter, you should be able to:

- discuss whether past performance is a guide to future performance;
- calculate time-weighted and money-weighted returns over multiple periods;
- discuss the methods of evaluating the risk-adjusted returns of an investment; and
- use performance attribution to analyse where managers have added value.

Introduction

In this chapter, we'll examine the performance of investments. We start by discussing the issue of whether past performance is a guide to future performance before moving on to look at performance measurement

and attribution.



Key terms

This chapter features explanations of the following:

Asset allocation	Benchmarking	Market timing	Money-weighted rate of return (MWR)
Past performance	Performance attribution	Performance evaluation	Performance measurement
Risk-adjusted returns	Time-weighted rate of return (TWR)		

A Introduction to investment performance

It is important to know how individual investments, portfolios, sectors and markets have performed in the past. This information is essential for:

- understanding investment markets generally;
- assessing the competence of fund managers and investment portfolio managers;
- in many cases, rewarding investment managers; and
- charging performance-related fees, where applicable.

A1 Predictions

The extent to which past performance is a guide to future performance is more difficult to assess. In a sense, past performance is all we have to go on, but when it is used for predictive purposes, it is important to understand the limitations. For example:

- UK equities have tended to outperform UK deposits and fixed-interest investments over longer periods. However, there have been significant periods when equities have underperformed.
- When predictions or inferences become more specific, the value of past performance seems to diminish, e.g. in comparisons of fund managers' track records.
- Most systems of identifying attractive investments depend on the analysis of past performance and then extrapolating it into the future. For example, beta factors are a measure of the relative volatility and correlation of individual securities to the market as a whole. This helpful analytical tool depends on the future volatility and correlation remaining much the same as in the past – which may not turn out to be the case.

A2 Investment management services

Good performance can be due to luck as well as skill; therefore it is advisable to evaluate the investment process that has delivered the performance. It is also important to assess the overall service provided to the client and the charges that have been paid.

A3 Financial calculations

Investment is becoming increasingly mathematical and rigorous in its analysis. An understanding of compound interest is fundamental to performance assessment and related financial calculations that need to be performed to help and fully advise clients. In previous chapters, we have covered the calculation of risk. Here, we consider using return to measure performance over multiple periods, incorporating cash flows and the importance of benchmarks.

B Performance measurement

In looking at the performance of an investment manager, it is necessary to differentiate between performance measurement and performance evaluation:

- **Performance measurement** involves the calculation of the investment return over a stated period.
- **Performance evaluation** is concerned with determining two issues:
 - whether the investment manager added value by meeting or outperforming a suitable benchmark; and
 - how the investment manager achieved the calculated return (e.g. by taking high or low risks or having a particular stock or asset strategy).

B1 Calculating returns

The calculation of the return from a portfolio can be measured in a number of ways; the two most common are **money-weighted rate of return (MWR)** and **time-weighted rate of return (TWR)**.

MWR measures the overall return on capital invested over a specific period, whereas TWR allows comparisons to be made of the performance of one fund manager with another.

(You should note that MWR is often used in the investment industry to refer to internal rate of return (IRR), however knowledge of IRR is not required for your R02 assessment.)

B1A Money-weighted rate of return (MWR)

The return on a portfolio may be expressed as being equal to the sum of:

- the difference in the value of the portfolio at the end of the period and the value of the portfolio at the start of the period; and
- any income or capital distributions made from the portfolio during that period.

The holding period return expresses the return in terms of the value of the portfolio at the beginning of the period; in equation form:

$$R = \frac{D + V_1 - V_0}{V_0}$$

where R is the holding period return, V_0 is the value of the portfolio at the start of the period, V_1 is the value of the portfolio at the end of the period and D is the income received during the period.



Example 9.1

The calculation of a holding period return for a portfolio worth £25,000 (V_0) at the start of the period, £28,000 at the end of the period (V_1) and which had £1,000 (D) income paid out is as follows:

$$= (1,000 + 28,000 - 25,000)/25,000$$

$$= 0.16$$

or 16%.

When new funds are invested or withdrawn during the year, the calculation can be modified to allow for differences in the timing of capital additions or withdrawals, weighting each by the number of months of the year remaining at the time they are affected.



Income withdrawn (D)

Please note that income withdrawn (D) is not being treated as a cash flow (C).

The MWR is essentially a modified form of the holding period return formula, and is used to calculate the return over the year which adjusts for cash inflows into the portfolio:

$$\text{MWR} = \frac{D + V_1 - V_0 - C}{V_0 + (C \times n / 12)}$$

where

n is the number of months remaining in the year

and

C is the new money introduced during the year. If it is added to the portfolio, it is a positive figure and will be subtracted from the returns in the numerator; if it is a withdrawal, it is a negative figure and has to be added back in to get the return. On the bottom line of the equation this logic is reversed – as we had the use of any capital injected for the balance of the year and lost the use of withdrawals for the balance of the year.

If income is received throughout the year and immediately reinvested, it can be ignored in calculating the total return on the portfolio.



Example 9.2

If a portfolio was worth £20,000 (V_0) at the start of the year, £24,000 (V_1) then at the end of the year, with the following transactions taking place during the year:

£3,000 invested at the end of March

£2,000 withdrawn at the end of September

the MWR would be:

$$\text{MWR} = \frac{D + V_1 - V_0 - C}{V_0 + (C_1 \times n/12) + (C_2 \times n/12)}$$

But $D = 0$ so can be ignored.

On the top line £3,000 has been added and £2,000 withdrawn, creating a net cash inflow of £1,000 (£3,000 – £2,000 = £1,000)

$$= \frac{24,000 - 20,000 - 1,000}{[20,000 + (3,000 \times 9/12) + (-2,000 \times 3/12)]}$$

On the bottom line of our equation we have reversed this logic to include the £3,000 capital we had for 9/12ths of the year and subtract the £2,000 capital lost for the last 3/12ths of the year.

$$= \frac{3,000}{20,000 + 2,250 - 500}$$
$$= 0.1379$$

Remember to multiply by 100 to express as a %.

MWR = 13.79%.

If you need to calculate the MWR for a fund with no cash flows, then $D = 0$ and $C = 0$, therefore you will be back to a basic holding period return.

$$\text{MWR} = \frac{V_1 - V_0}{V_0}$$

The rate of return produced by this method can be considered the rate of interest that the initial portfolio, plus net new money, must earn in a deposit account to equal the portfolio's actual value at year end.

Drawbacks of MWR

The MWR method of measuring returns is not considered appropriate when trying to evaluate and compare different portfolios. This is because it is strongly influenced by the timing of cash flows – this timing could be outside of the fund manager's control and is often decided by the client. It does not identify whether the overall return for the investor is due to the ability of the fund manager or as a result of when additional funds were invested.

B1B Time-weighted rate of return (TWR)

TWR attempts to eliminate the distortions caused by the timing of new money by breaking down the return for a particular period into sub-periods between each addition or withdrawal of capital. The TWR for the overall period is established by compounding the returns of each sub-period. It is the change in the value of money invested on day 1 that stays invested for the whole period.

For each sub-period we need to calculate the holding period return.

We can then link all these discrete returns together to calculate the TWR for the overall period. The general formula is:

$$1 + R = (1 + r_1)(1 + r_2)(1 + r_3)(1 + r_4)\dots\dots(1 + r_n)$$

where $R = \text{TWR}$ and r_i is the holding period return in each sub-period, when there are n sub-periods.

In the case of two periods it would be:

$$\text{TWR} = R = \frac{V_1}{V_0} \times \frac{V_2}{(V_1 + C)} - 1$$

An exact calculation of a TWR would require a full valuation of the portfolio whenever a cash flow occurs. In practice, approximations are made so that the TWR can be calculated using either monthly or quarterly portfolio valuations.



Example 9.3

Assume that all investments are directed into one stock that rises sharply over the course of one year. At the start of the year, the stock has a value of 100p; after six months, its value is 110p; and by the end of twelve months it has risen to 130p.

Manager A receives £200 at the start of the period, while manager B receives £100 at the start of the period and then a further £100 after six months.

Manager A

Value of initial fund: £200 (200 shares at 100p)

Value of final fund: £260 (200 shares at 130p)

$$\text{Holding period return} = \frac{V_1 - V_0}{V_0} \quad (\text{There are no dividends so } D = 0)$$

$$\text{Rate of return} = \frac{(260 - 200)}{200}$$

$$= 0.30 \text{ or } 30\% \quad (\text{which is also the TWR since we are only considering one period})$$

Manager B

Initial investment of 100 shares grows to be worth £110.

$$\text{Holding period return} = \frac{V_1 - V_0}{V_0} \quad (\text{There are no dividends so } D = 0)$$

$$= \frac{110 - 100}{100}$$

$$= 0.1 \text{ or } 10\%$$

Second investment:

With the second £100 we can buy 90 shares (100/1.10 rounded down to the nearest number of whole shares). This means we start with 190 shares worth £209 plus £1 cash which is £210 (190 × £1.10 + £1), and end the period with £248 (190 × £1.30 +

£1).

$$\begin{aligned}\text{Holding period return} &= \frac{V_1 - V_0}{V_0} \quad (\text{There are no dividends so } D = 0) \\ &= \frac{248 - 210}{210} \\ &= 0.1810 \text{ or } 18.10\%\end{aligned}$$

We can now link these returns as they relate to the same period:

$$1 + R = (1 + r_1)(1 + r_2)$$

where $R = \text{TWR}$.

$$1 + R = (1.1)(1.1810)$$

$$1 + R = 1.2991$$

$$R = 1.2991 - 1$$

$$R = 0.30 \text{ or } 30\%.$$

The TWR is the same for both funds (there is a small difference due to £1 in cash not generating a return but this is lost in rounding) since both invested in the same stock, and the TWR has not been distorted by the cash flow to manager B at the end of six months.

However, calculating the MWR reveals that manager B achieves a higher return.

$$\begin{aligned}\text{MWR} &= \frac{(248 - 100 - 100)}{100 + (\frac{1}{2} \times 100)} \\ &= 48/150 = 0.32 \text{ or } 32\%\end{aligned}$$

Both managers were instructed to invest in only one share, but their respective measured performance (MWR) might suggest that manager B achieved a better result. To overcome this problem, TWR is usually used to allow direct comparisons between managers. The investment performances between cash flows is used to determine the overall performance. This method takes into account investment income and new money, as well as both realised and unrealised capital profits or losses.

In summary, MWR can be used to calculate a valid rate of return for an individual portfolio, but it gives misleading results if it is used for comparative purposes. TWR is universally used for comparative purposes, because it is not affected by the timing of cash flows and different new money flows.



Question 9.1

A fund manager is given £1 million to invest at the beginning of the year. After three months the portfolio has risen in value to £1.15 million and the client gives the manager another £0.2 million to invest. At the end of the year, the portfolio is worth £1.25 million. Calculate the MWR and TWR for the portfolio over the year.

B2 Risk-adjusted returns

Performance measurement has become much more sophisticated in recent years, with the availability of a range of tools and services employing statistical analysis.

Simple performance analysis consists of looking at actual total returns and volatility over cumulative and discrete periods, comparing a fund with its benchmark index, sector index and possibly a small peer group of funds sharing common strategies and aims.

Cumulative returns shown in tabular form are a poor guide because they can conceal alternating periods of good and bad relative performance, and a period of good performance near the end of the period can mask earlier underperformance. Study of discrete periods (often successive calendar years) can reveal greater or lesser consistency in returns and volatility.

Sophisticated performance analysis takes monthly returns and volatility, and subjects them to analysis using a number of ratios. This helps to reveal whether the manager's decisions are adding value. Analysis could show that a manager's positive returns result from having a portfolio with a higher than average beta. In upwards trending markets, this will result in above-average returns, but it will also result in lower than average returns in falling markets.

When assessing portfolio performance, it is critical to consider the returns against the risk that has been taken. If a portfolio manager has taken a high level of risk, it is reasonable for an investor to expect a higher return to compensate for the risk taken, and similarly a client who requests a low-risk strategy should expect relatively low returns.

Earlier we considered two ways that risk can be measured:

- volatility of returns, measured by standard deviation of returns; and
- systematic or market risk, measured by beta (β).

We will now consider three ways to measure risk-adjusted returns, the **Sharpe ratio**, **alpha** and the **information ratio**.

B2A Sharpe ratio

The Sharpe ratio is a measure of the risk-adjusted return of an investment. It measures the excess return for every unit of risk that is taken to achieve the return and is frequently used for comparing investments to see which offers the most return for a given amount of risk. For instance:

The ratio is:
$$\frac{\text{return on the investment} - \text{risk-free return}}{\text{standard deviation of the return on the investment}}$$

- The difference between the return achieved by the investment and the risk-free rate is the excess return received for taking some risk.
- Risk is measured by the standard deviation of returns.

It is usually desirable to measure risks and returns using fairly short periods, e.g. monthly. However, it is common practice to annualise the data (multiplying the average monthly returns by twelve, and a monthly standard deviation by the square root of twelve) for the purposes of standardisation and to be able to make comparisons between investments.



An investment portfolio has an annualised return of 10% compared to a 4% annual return from a risk-free investment. The standard deviation of the portfolio is 8%.

$$\text{The Sharpe ratio is } \frac{10.0 - 4.0}{8.0} = 0.75$$

This indicates that the portfolio earned a 0.75% return above the risk-free rate for each unit of risk taken.

The Sharpe ratio is a method for comparing different risk/reward options. Generally, the higher the Sharpe ratio the better the return on an investment compensates an investor for the risk taken. A negative Sharpe ratio indicates that a risk-free asset would have performed better than the investment being analysed.

It can be a useful measure to identify whether the returns on a portfolio or fund are due to the skilful investment decisions of the manager, or the result of taking excessive risk. Although one portfolio or fund may achieve higher returns than its peers, it is only a good investment if the higher returns do not come with too much additional risk.



Interpreting the Sharpe ratio

The greater a portfolio's Sharpe ratio, the better its risk-adjusted performance has been.



Example 9.5

Comparing portfolio performance with the Sharpe ratio

If manager A generates a return of 14%, while manager B generates a return of 11%, it would appear that manager A has a better performance. However, if manager A, who produced the 14% return, took greater risk than manager B, it may not actually be the case that manager A has a better risk-adjusted return.

If the risk-free rate is 4% and manager A's portfolio has a standard deviation of 8%, while manager B's has a standard deviation of 5%, then:

$$\text{The Sharpe ratio for manager A is } \frac{14.0 - 4.0}{8.0} = 1.25$$

$$\text{The Sharpe ratio for manager B is } \frac{11.0 - 4.0}{5.0} = 1.40$$

Based on these calculations manager B was able to generate a higher return on a risk-adjusted basis.



Question 9.2

Calculate the Sharpe ratio for a portfolio that has an annualised return of 9.5%, if the standard deviation of the portfolio is 8% and the return from a risk-free investment is 3.5%.

B2B Alpha

Alpha, α , or more accurately Jensen's alpha, is the difference between the return you would expect from a security, given its beta, and the return that it has actually produced. It is the part of the return which cannot be explained by movements in the overall market.

In some cases, alpha is used by managers to simply mean the under or outperformance of an investment in relation to its benchmark.



Positive and negative alpha

An alpha can be positive or negative:

- a positive alpha indicates that the security has performed better than would be predicted given its beta; and
- a negative alpha indicates that it has performed worse than would be predicted by its beta.

For an investment fund or portfolio, alpha allows us to quantify the value added or taken away by a manager through active management, since it is independent of the underlying market or benchmark performance and is a measure of a manager's stock-picking skill. It is the return that is not explained by the capital asset pricing model (CAPM), covered in [chapter 3, section B](#).

The formula is:

$$\alpha = \text{actual portfolio return} - [R_f + \beta_i (R_m - R_f)]$$

where

R_f is the risk-free rate of return.

R_m is the market return.

β_i is the beta of the fund or portfolio.

Note that we are now using actual returns rather than expected returns, since we are applying the CAPM to historic data. Often the calculation uses monthly returns over the last three years, although the reported alpha is usually an annualised number. The alpha for an individual security is calculated in the same way as a portfolio or fund.



Example 9.6 Calculating alpha

	Fund A	Fund B
Fund return	12%	10%
Risk-free rate	4%	4%
Market return	10%	10%
Beta	1.2	0.8
Alpha	$12 - [4 + 1.2(10 - 4)]$ = 0.8%	$10 - [4 + 0.8(10 - 4)]$ = 1.2%

Note that when working out the alpha of the above funds, we calculate the inner brackets first. For example, in fund A, $10 - 4$ is 6. Next is the multiplication, so 1.2×6 is 7.2. Then we do the addition, $4 + 7.2$ is 11.2, and finally we subtract 11.2 from 12, which gives us the alpha for fund A of 0.8%.



Question 9.3

Calculate the alpha of a fund that has provided an average return of 12% per year, if the fund has a beta of 1.5, the return on the market was 8%, and the risk-free rate was 2%.

Alpha is widely used to evaluate funds and a portfolio manager’s stock-picking ability. As we just saw, positive alpha means that the manager has outperformed the market after adjusting for beta, while a negative alpha would indicate that the manager has underperformed the market after adjusting for beta. In some cases, however, a negative alpha can result from the fund management expenses that are present in the fund performance figures, but not in the figures of the comparative benchmark index.

B2C Information ratio

The information ratio is used to assess the risk-adjusted performance of active portfolio managers. It is often used to gauge the skill of fund managers and shows the consistency with which a manager beats a benchmark index.

The information ratio measures the relative return achieved by an investment manager divided by the amount of risk the manager has taken relative to a benchmark. The relative return is the difference between the return on the actively managed portfolio and the return on the benchmark. This relative return can be positive or negative. The risk taken relative to the benchmark is the tracking error, which is the standard deviation of the relative returns.

The formula is:

$$\text{Information ratio} = \frac{R_p - R_b}{\text{tracking error}}$$

where

R_p is the portfolio return and R_b is the benchmark return.



Example 9.7 Information ratio

	Fund A	Fund B
Fund return	12%	11%
Benchmark return	10%	10%
Tracking error	8%	3%
Information ratio	$(12 - 10)/8 = 0.25$	$(11 - 10)/3 = 0.33$

Although fund A has a higher return than fund B, when we adjust for the risk taken against the benchmark to achieve these returns, the information ratios show that B has generated a higher risk-adjusted return.



Question 9.4

Calculate the information ratio for a fund that has provided an average return of 13% per year compared with a benchmark return of 10%, if the fund has a tracking error of 6%.

The higher the positive information ratio, the higher the value added by the manager through active management, based on the amount of risk taken relative to the benchmark.



Negative information ratio

A negative information ratio means that an investor would probably have achieved a better return by matching the index using a tracker or index fund.

C Performance attribution

It is also important to evaluate how portfolio managers achieve their returns. Portfolio managers achieve good or bad results by the exercise of the following:

- **Asset allocation:** the division of the investments into the different types of assets, such as different markets or different types of securities. If the US market outperforms other markets during a period and the manager has a high proportion of the portfolio in that market, it will make a considerable difference to the returns achieved. Most portfolio managers tend to describe themselves as top-down strategists, where performance comes first from asset allocation.
- **Stock selection:** the choice of shares that have individually outperformed.
- **Market timing:** deciding on when to introduce or withdraw funds from the market.
- **Risk:** managers may decide to take more or less risk than the benchmark, depending on their views about the market.

In performance evaluation, it is necessary to show the separate contribution of these approaches. Some investment managers aim to achieve above average returns from their skill in stock selection, while others may choose to run a riskier portfolio.



Success or failure?

It is important to be able to distinguish the basis of success or failure by performance evaluation. This is usually achieved by comparing the composition of the portfolio with a suitable benchmark portfolio and then looking at the effects of asset allocation and stock selection separately.

Step 1: The benchmark

Choose an appropriate benchmark to compare the portfolio. In the case of a charity that needs to provide a high level of income, an average charity's portfolio might be appropriate. There are a variety of portfolios that have now been benchmarked for different purposes, depending on the attitude to risk and the income needs of the clients. In the case of a pension fund, the appropriate benchmark would depend on the size and maturity of the pension scheme. Where there are many pensions in payment, the proportion of the fund in UK fixed-interest is likely to be higher than a fund where most of the members are relatively young.

Step 2: The benchmark asset allocation

Find out the asset allocation for the benchmark fund over the period to be evaluated. For example, it might be as follows:

UK equities	55%
Overseas equities	25%
Fixed interest	15%
Cash	5%

Step 3: Benchmark returns

Calculate the return that each asset class in the benchmark portfolio would have achieved if it had performed in line with the appropriate index for its sector. For example, the index for UK equities would probably be the FTSE All-Share Index.

During the period, the various indices for the component parts of the portfolio performed as follows:

UK equities	20%
Overseas equities	15%
Fixed interest	10%
Cash	5%

So the return on UK equities in this benchmark portfolio would be $55\% \times 20\% = 11\%$.

The actual index performance of each class of asset is then applied to the asset allocation of the benchmark portfolio to provide the model rate of return; this is then compared with the actual portfolio.

Asset class	Benchmark asset allocation %	Index performance for each class %	Contribution to return %
UK equities	55	20	11.00
Overseas equities	25	15	3.75
Fixed interest	15	10	1.50

Cash	5	5	<u>0.25</u>
Overall contribution to return			16.50

This schedule shows that the manager could have achieved a return of 16.5% over the period if they had:

- copied the distribution of the asset classes in the model portfolio, in this case the average asset allocation for the market;
- tracked the appropriate index for each class of asset.

Step 4: Comparison of asset allocation

Compare this benchmark or model performance with the actual portfolio’s performance in terms of the asset allocation. This comparison is made by assuming that the:

- asset allocation is the same as the manager’s portfolio; and
- performance of each class of asset is the index performance (rather than the actual performance achieved by the manager).

This should show how the manager’s allocation between different classes of asset contributed towards the portfolio in isolation from other factors, such as stock selection.

Asset class	Manager asset allocation %	Index performance for each class %	Contribution to return %
UK equities	45	20	9.00
Overseas equities	25	15	3.75
Fixed interest	20	10	2.00
Cash	10	5	<u>0.50</u>
Overall contribution to return			15.25

The contribution to return for each asset class is calculated by multiplying the asset allocation of each asset class by the index performance:

- In this particular case, the manager had a portfolio of UK equities that was 10% underweight compared to the model; i.e. the model had 55% in UK equities and the manager’s portfolio had 45%

in this class of asset. UK equities in general, as measured by the benchmark index performance, did well over the period (equities returned 20% versus the average benchmark return of 16.5%), so being underweight has a negative effect on the portfolio.

- However, fixed-interest securities were overweight and performed poorly in the benchmark index (returned 10% versus the average benchmark return of 16.5%), so this asset allocation decision also has a negative effect on the portfolio. Similarly, cash was overweight (10% versus 5% benchmark weighting) and performed poorly in the benchmark index which had a further negative effect.
- Overall, the benchmark portfolio performed better than the manager's asset allocation. The benchmark portfolio rose by 16.5% over the period and the estimated performance applying to the asset allocation of the manager's portfolio was 15.25%, so 1.25% was lost due to the manager's asset allocation decisions.

Step 5: Stock selection and/or sector choice

Calculate the effect of stock selection or sector choice. This involves comparing the index performance for each class of asset with the manager's actual performance within these categories, thereby removing the effects of asset allocation. The aim is to see how the manager's selection of investments within each asset class performed relative to the appropriate index. Outperformance or underperformance could be the result of either:

- **Sector choice**, i.e. being overweight or underweight in particular sectors. For example, property and bank shares underperformed most of the rest of the UK market during the financial crisis and so a portfolio that was overweight in these areas would probably have underperformed. In large markets like the UK, there are individual indices for each component part of the overall index.
- **Stock selection**, i.e. being overweight or underweight in a particular share in a sector. For example, within the construction and building materials sector, one particular share may have outperformed the rest of the constituent companies.

The contribution of stock or sector selection can be isolated from asset allocation by multiplying the difference in actual and index performance by the benchmark asset allocation.

Asset class	Benchmark asset allocation %	Index performance %	Actual performance %	Contribution to return %
UK equities	55	20	25	+2.75
Overseas equities	25	15	5	-2.50
Fixed interest	15	10	10	0
Cash	5	5	10	<u>+0.25</u>

The manager outperformed the UK equity index over the period by 5% and this constituted 55% of the benchmark portfolio. So $(25 - 20) \times 55\% = 2.75\%$.

The outperformance of UK equities and cash in this portfolio was largely offset by the underperformance of stock or sector selection in overseas equities, and the overall stock selection contribution was very low at only 0.5%.



Consider this...

This explanation is an oversimplification. In practice, the analysis of overseas equities would look at the weighting of different markets and the performance of each group of overseas shares in relation to its local market index.



Activity

Let us say that you have client portfolios which contain more than one asset class, use performance attribution to analyse whether value has been added from asset allocation, and/or stock selection over the benchmark over the past year. Does the result tie-in with what you intuitively thought would be the case before you did the calculation?



Key points

The main ideas covered by this chapter can be summarised as follows:

Introduction to investment performance

- It is important to know how individual investments, portfolios, sectors and markets have performed in the past.
- When past performance is used for predictive purposes, it is important to understand the limitations.
- It is advisable to evaluate the investment process, as well as the performance numbers, when judging the performance of an investment manager.

Performance measurement

- The two most common ways of measuring return are money-weighted return (MWR) or time-weighted return (TWR).
- The formula for MWR is:

$$\text{MWR} = \frac{D + V_1 - V_0 - C}{V_0 + (C \times n/12)}$$

where

V_0 is the value of the portfolio at the start of the period, V_1 is the value of the portfolio at the end of the period, D is the income paid out during the period, n is the number of months remaining in the year, and C is the new money introduced during the year. The MWR is affected by the timing of the cash flows and is not suitable for comparing fund managers' performance.

- The formula for TWR is $\text{TWR} = (1 + r_1)(1 + r_2)(1 + r_3)(1 + r_4)\dots\dots(1 + r_n) - 1$ where r_i is the holding period return in each sub-period (usually calculated between cash flows) and there are n sub-periods. TWRs are unaffected by the timing of cash flows, so this method is more appropriate for comparing fund managers.

Risk-adjusted returns

- The Sharpe ratio is a measure of how well the return on an asset compensates the investor for the risk taken.
- Alpha (α) is the difference between the return you would expect from a security, given its beta, and the return that it has actually produced.
- The information ratio is used to assess the risk-adjusted performance of active portfolio managers. It shows the consistency with which a manager beats a benchmark.

Performance attribution

- Performance attribution can be used to differentiate between returns that are a result of asset allocation decisions versus sector or stock selection decisions.
- The first steps in performance attribution are to identify the benchmark, determine the asset allocation of the benchmark, and determine the performance of each asset class and the benchmark return. After identifying the portfolio asset allocation, calculate the return of the portfolio with the same asset allocation and compare this to the benchmark return to work out the effect of the manager's asset allocation decision. The difference between the portfolio return and benchmark return is explained by sector and stock selection.



Question answers

9.1 The MWR and TWR for the portfolio over the year, would be:

$$\begin{aligned} \text{MWR} &= \frac{V_1 - V_0 - C}{V_0 + (C \times n/12)} \\ &= \frac{1.25 - 1.0 - 0.2}{[1.0 + (0.2 \times 9/12)]} \end{aligned}$$

Note it is 9/12 in the denominator since the money was added three months into the year.

$$\begin{aligned} &= \frac{0.05}{1.15} \\ &= 0.0435 \\ \text{MWR} &= 4.35\% \end{aligned}$$

In the case of two periods TWR is given by:

$$\begin{aligned}
 \text{TWR} = R &= \frac{V_1}{V_0} \times \frac{V_2}{(V_1 + C)} - 1 \\
 &= \frac{1.15}{1} \times \frac{1.25}{(1.15 + 0.2)} - 1 \\
 &= (1.15 \times 0.9259) - 1 \\
 &= 1.0648 - 1
 \end{aligned}$$

$$\text{TWR} = 6.48\%$$

Note the MWR is lower since the performance deteriorated after the cash inflow.

Please note that you should use the full values as shown on your calculator when doing this calculation. The figures shown here have been rounded to four decimal places for presentation purposes.

9.2 The Sharpe ratio for a portfolio would be:

$$\text{Sharpe ratio} = \frac{9.5 - 3.5}{8} = 0.75$$

9.3 The alpha of a fund would be:

$$\text{Alpha} = 12 - [2 + 1.5(8 - 2)] = 1\%$$

9.4 The information ratio of a fund would be:

$$\text{Information ratio} = \frac{13 - 10}{6} = 0.5$$



Self-test questions

1.	What is the MWR for a portfolio initially worth £384,000 and now valued at £426,500, and which had £16,000 income paid out?
2.	What are the purposes of MWR and TWR?
3.	What does the Sharpe ratio measure?
4.	What does Jensen's alpha measure?

5.
 - a. What does the information ratio measure?
 - b. What does a positive information ratio indicate?

You will find the answers at the back of the book

Chapter 1.1 self-test answers

1.
 - Investors receive regular interest on their deposits at the prevailing rate.
 - The investor's capital is not exposed to investment risk.
2. Up to 100% of the first £85,000.
3.
 - Notice accounts.
 - Term deposits or time deposits.
4. 'Negotiable' means that, after being issued, the security can be traded on the secondary market, and the price of the security varies with market conditions.
5.
 - The price at which the gilt will be redeemed at the redemption date.
 - The amount on which the interest that will be received is calculated using the gilt's coupon.
6. The interest or running yield measures the income return an investor receives on the amount paid for a bond. The formula is
$$\frac{\text{coupon}}{\text{clean price}} \times 100$$
7. The most volatile bonds are those with a long period to maturity and low coupons.
8. A reverse yield curve indicates that yields are lower for longer-dated bonds than for short-dated ones, that is, the yield curve falls from left to right. This is the opposite to a normal yield curve, which rises from left to right to reflect the higher yield usually required for investors to hold longer-dated bonds. A reverse yield curve occurs temporarily (although for many months at a time in some circumstances), when long-term interest rates are substantially below current short-term levels and short-term interest rates are expected to decline.
9. A corporate bond often yields more than the equivalent gilt. There is a higher credit risk involved in lending to commercial concerns: they can become insolvent, unlike a government. The corporate bond market is also generally less liquid, leading to wider bid/offer spreads and an increased risk that a bond cannot be traded when desired, for which investors require a compensating higher return.

Chapter 1.2 self-test answers

10.
 - Future expectations.
 - Historic and current knowledge of a company's performance.
11. A rise in interest rates is likely to depress builders' share prices as higher mortgage costs could deter house buyers.
12. Preference shares are similar to bonds in that they pay a fixed income in the form of a dividend that has preference over normal dividends. Preference share dividends are taxed as dividend income and not at the savings rates payable on the receipt of interest. Also, preference shares are often issued with redemption dates.
13. Ordinary shareholders are entitled to share the residual value of a company's assets after all debts are discharged and other shareholders have received their entitlements.
14. Whilst private equity can deliver high returns, there is a high risk of losses as some of the companies in which a fund invests will fail and others will not grow quickly. They can also carry high leverage and are vulnerable to a domestic downturn or recession. Listed private equity stocks are less liquid than listed securities. This can make realising an investment difficult and it also makes the share prices more volatile as trading volumes can be very low.
15. The P/E ratio compares the company's share price with its earnings per share. A high P/E ratio usually indicates that investors are optimistic about the future earnings growth of the company. However, a P/E ratio does not indicate whether a share price will rise or fall.
16. A key reason would be to obtain additional diversification, especially from equity investments. Property values tend to follow business profitability, in very general terms, and are therefore less volatile than stock markets. Where property is let on attractive terms to good quality tenants, it has some of the characteristics of fixed-interest securities. Yet, because property is asset backed, it can also provide long-term protection against inflation.
17.
 - They usually do not generate any form of income.
 - They often cost money to keep, and may incur charges in the form of insurance premiums, specialist storage charges, security costs or maintenance.
 - Demand is driven by the tastes of collectors, which can change.
 - Authenticity can be difficult to prove.
 - There are high costs associated with buying and selling.
 - It can be difficult to diversify.
 - Specialist knowledge is needed to buy successfully.
18.
 - Hard commodities, which are the products of mining and other extractive processes – they include metals, crude oil and natural gas.
 - Soft commodities, which are typically grown – they include coffee, cocoa, sugar, corn, wheat and livestock.

Chapter 2 self-test answers

1. A government's policy changes can have an important impact on economic and financial conditions. Political developments can change the investment climate, both for the economy and for individual sectors.
2. National economies have become increasingly integrated and financial markets move more and more in step, so investors need an international perspective when allocating assets.
3.
 - recovery/expansion;
 - boom;
 - slowdown or contraction; and
 - recession.
4. Share prices generally begin to recover while the economy is in recession, falter when interest rates are raised to curb inflation in a boom and fall back as the economy slows down.
5.
 - The different tax treatment of different types of asset will influence investment decisions.
 - The tax treatment of a company's earnings will affect its dividend policy and whether it raises capital through debt or equities.
6. The most commonly quoted measures of money supply in the UK are M0 (narrow money) and M4 (broad money).
 - M0 comprises notes and coins in circulation, plus banks' operational deposits with the Bank of England.
 - M4 comprises notes and coins in circulation, plus all instant access and time deposit accounts of UK residents with UK banks and building societies.
7.
 - It eases monetary policy.
 - If the market agrees with the Bank's view of the prospects for inflation, longer-term interest rates will reduce.
 - This will lead to rising asset prices, wealth will increase, making people more willing to borrow and spend, stimulating demand.
 - Low interest rates will encourage more borrowing.
 - Those dependent on income from cash deposits will be worse off.
8.
 - If there is a surplus it means that the country exports more goods than it imports. Buyers have to acquire the currency to pay for the goods, increasing the country's foreign reserves and strengthening the currency.
 - If there is a deficit it implies the need to sell the local currency to acquire foreign goods.
9. The value of any profit earned from either investments in overseas markets or from selling products overseas is affected by the exchange rate. The profit may be increased or reduced depending on the exchange rate when it is converted into the domestic currency.
The profitability of their export business affects the value of the shares of exporting companies.

Chapter 3 self-test answers

1. The standard deviation measures how widely the actual return on an investment varies around the mean or expected return. The greater the standard deviation, the greater the volatility and the associated risk.
2. Beta measures the sensitivity of a security to a market.
3. Non-systematic or investment-specific risk.
4. The efficient frontier represents the set of portfolios that have the best risk-reward tradeoffs, so for any level of risk the portfolio on the frontier with that level of risk will give the best return for an investor.
5. Ninety-one-day Treasury bills, as there is virtually no default risk and, because of their short life, interest and inflation risks are minimal. Another risk-free rate that is less commonly used is the long-gilt yield.
6. APT is based on the belief that there is more than one type of risk that influences security returns, with different securities having different sensitivities to each risk. CAPM argues that returns are based on the systematic risk to which a security is exposed, rather than total risk.
7. Weak form efficiency. This states that current security prices fully reflect all past price and trading volume information and future prices cannot be predicted by analysing this type of historical data.
Semi-strong form efficiency. This states that security prices adjust to all publicly available information very rapidly and in an unbiased way, so that no excess returns can be earned by trading on that information.
Strong form efficiency. This states that security prices reflect all information that any investor can acquire.
8. Behavioural finance highlights inefficiencies caused by the irrational way in which investors react to new information, which causes market trends and speculative bubbles.

Chapter 4 self-test answers

1.

$$\begin{aligned}FV &= £20,000 \times (1 + r)^n \\&= £20,000 \times (1.03)^5 \\&= £20,000 \times 1.16 \\&= £23,185.48.\end{aligned}$$

Please note that you should use the full values as shown on your calculator when doing this calculation (1). The figures shown in the answers above have been rounded to two decimal places, where appropriate, for presentation purposes.

2.

$$\begin{aligned}r &= 0.06 \\n &= 12 \\&\text{so} \\ \text{EAR/APR/AER} &= (1 + r/n)^n - 1 \\&= (1 + 0.06 / 12)^{12} - 1 \\&= (1.005)^{12} - 1 \\&= 1.0617 - 1 \\&= 0.0617.\end{aligned}$$

And multiply by 100 to express as a % to two decimal places

$$\text{AER} = 6.17\%.$$

Please note that you should use the full values as shown on your calculator when doing this calculation (2). The figures shown in the answers above have been rounded to four decimal places, where appropriate, for presentation purposes.

3. **Building Society A:**

$$\begin{aligned}\text{AER} &= (1 + r/n)^n - 1 \\&= (1 + 0.057/2)^2 - 1 \\&= (1.0285)^2 - 1 \\&= 1.0578 - 1 \\&= 0.0578 \text{ or } 5.78\%.\end{aligned}$$

Building Society B:

$$\begin{aligned}\text{AER} &= (1 + r/n)^n - 1 \\&= (1 + 0.0565 / 12)^{12} - 1 \\&= (1.0047)^{12} - 1\end{aligned}$$

$$= 1.0580 - 1$$

$$= 0.0580 \text{ or } 5.80\%.$$

Building Society B offers a marginally better rate.

Please note that you should use the full values as shown on your calculator when doing these calculations (3). The figures shown in the answers above have been rounded to four decimal places, where appropriate, for presentation purposes.

4. $FV = PV(1 + r)^n$

$$£10,000 = PV(1.02)^3$$

$$£10,000 = PV(1.0612)$$

$$£10,000 / 1.0612 = PV$$

$$PV = £9,423.22$$

Remember we have only rounded up to four decimal places for illustrative purposes, although the full value should be used in the calculation, which gives us a final answer of £9,423.22 and not £9,423.29.

Please note that you should use the full values as shown on your calculator when doing this calculation (4). The figures shown in the answers above have been rounded to two decimal places, where appropriate, for presentation purposes.

5. $R_{\text{REAL}} = R_{\text{NOM}} - R_{\text{INF}}$

$$R_{\text{REAL}} = 6\% - 3\%$$

$$= 3\%$$

The approximate real rate of return is 3%.

Chapter 5 self-test answers

1. No, maximising nominal returns with investment safety is usually more important, although inflation could be a major issue in periods of high inflation. In periods of low inflation, it is more of an issue for longer-term investments.
2. Interest rate risk, credit risk and inflation risk are the main risks, but event risk and liquidity risk should also be considered.
3. The five different types of credit risk are:
 - Default risk – the risk the issuer defaults on an interest payment or repayment of capital.
 - Downgrade risk – the risk the bonds are downgraded by a rating agency or a downgrade is anticipated.
 - Credit spread risk – the risk that credit spreads change. A widening of credit spreads will lead to corporate bonds underperforming gilts.
 - Counterparty risk – the risk that a counterparty will not pay what it is obliged to pay on a security or other transaction.
 - Bail-in risk – the risk that financial assistance comes from the existing capital base, i.e. the institution's shareholders, bondholders and depositors, not a government or central bank.
4. If the investment costs £100,000, say, and they borrow 25% which is £25,000, then their outlay is £75,000. If the investment falls by 10% or £10,000, then this is 13.33% of £75,000. They have lost 13.33% of their original investment.

Chapter 6.1 self-test answers

1. The authorised corporate director (ACD).
2. 90%.
3. The register must contain:
 - the name and address of the unitholders;
 - number of units of each type held by each unitholder; and
 - the date on which the holder was registered.
4. Market the trust in any of the EU Member States, subject to that state's marketing rules.
5. An equalisation payment will usually be included in the first distribution to a unitholder and represents a partial refund of the original capital invested (as the price paid per unit included accrued income). It is not subject to income tax and is instead treated as a deduction from book cost for CGT purposes.
6. A collective investment (in the form of a public limited company) that pools the money of many investors, spreading it across a diversified portfolio of stocks and shares that are selected and managed by professional investment managers. Investment trusts issue a fixed number of shares and are regulated by company law, and their shares are traded on the London Stock Exchange.
7.
 - The investment managers must have adequate experience.
 - There must be an adequate spread of investment risk.
 - The company must not control, or seek to control, or be actively involved in the management of the companies in which it invests.
 - The trust must not, to a significant extent, be a dealer in investments.
 - The trust must have a board that can act independently of its management.
8. Conventional and split capital investment trusts.
9. The redemption yield measures the capital and income return on a particular share until wind-up, expressed as an annual percentage.
10.
 - Zeros have fixed redemption dates, typically no more than ten years. They pay no income and have preferential rights over the distribution of capital.
 - They are issued at an initial value, which rises at a pre-determined compound annual growth rate until it reaches the final redemption value.
11. Financial gearing is when investment trust managers borrow money to take advantage of a good investment opportunity which they would not otherwise be able to take due to a lack of free capital.
12.
 - Investment trusts approved by HMRC are not subject to any tax on gains made from the sale of shares or other holdings in their portfolios.
 - They are not subject to any tax on franked income.
 - They have to pay corporation tax on unfranked income. Trusts may reduce their tax liability by offsetting their own expenses against the unfranked income.
 - Investors are liable to CGT on their profits, if they are selling investment trust shares for more than the initial cost.

Chapter 6.2 self-test answers

13. The MVR is applied to unitised with-profit funds and was previously known as the market value adjustment factor.
Life offices usually reserve the right to reduce the amount paid on surrender of a policy during times of adverse market conditions and do this by applying the MVR.
It does not usually apply on death or maturity. Its aim is to prevent the value of assets leaving the fund exceeding the value of the underlying assets.
14. Distribution bonds – suitable for cautious investors requiring income.
- 15.
- Conventional with-profit endowment.
 - Low-cost endowment savings plans.
 - A unitised with-profit fund of a unit-linked contract.
- 16.
- Guaranteed income bonds.
 - High income bonds.
 - Guaranteed growth bonds.
 - Unit-linked bonds.
 - Distribution bonds.
 - Guaranteed/protected equity funds.
 - With-profit bonds.
- 17.
- Death of the life assured.
 - Maturity.
 - Surrender or final encashment of a policy.
 - Certain part surrenders.
 - Assignment for money or money's worth.
18. To provide, for the private investor, a liquid market in property investment through a widely accessible savings and investment vehicle, which has a tax treatment that is closely aligned to the tax arrangements in place for direct investment in property.
19. Distributions from REITs can comprise of two elements:
- A payment from the tax-exempt element. For individual investors, this is treated as UK property income, and will be paid net of basic-rate tax (20%). Non-taxpayers can reclaim the tax deducted. ISA investors receive payments gross. Higher- and additional-rate taxpayers will pay extra.
 - A dividend payment from the non-exempt element. This will be treated in the same way as any other UK dividend. Whether they owe any tax depends on the investor's individual tax position.
20. Re-investment must take place in the period beginning one year before and ending three years after the disposal giving rise to the gain:
- deferred gain is brought into charge when the EIS shares are disposed of, unless a further qualifying reinvestment is made;
 - CGT rate applied to a deferred gain will be the rate at the time the deferral ends and the gain becomes liable to tax;
 - gains arising on the disposal of EIS investments that qualified for income tax relief are exempt from CGT as long as the shares have been held for three years;

- losses on EIS investments are allowable where either income tax relief or CGT deferral relief has been obtained, although a deduction is made for the initial income tax relief that has been given. A loss can be set against either chargeable gains or income.

21. All UK resident children aged under 18 who do not have a CTF.

22. At age 18 the Junior ISA will by default become an adult ISA. The funds are then accessible to the child.

23. Sell FTSE 100 futures or buy a FTSE 100 put option.

24.

- long/short funds;
- relative value funds;
- event driven funds; and
- tactical trading funds.

25. Three from:

- There may be higher volatility of performance, because fewer investments will be held than within a collective investment.
- For smaller portfolios, the costs may be higher.
- Direct investment generally requires greater involvement by an investment manager, particularly for an advisory client.
- The results may be more variable, because they depend largely on individual managers, and the performance of one or two stocks could have a disproportionate effect on the overall portfolio.
- In larger portfolios, CGT may be payable on gains realised within the directly invested portfolio. It may be necessary to switch individual investments more frequently than collective investments, thereby possibly incurring a CGT charge.
- There may be more administration than with collective investments, although this will usually be minimised by the use of nominee and other services such as dividend collection.
- Value added tax (VAT) will be charged on management fees, which are not tax relieved in any way.

Chapter 7 self-test answers

1. The longer an investor can hold onto volatile investments, such as shares or property, the greater is the likelihood that they can ride out cyclical or other short-term downturns.
2. There are two reasons why liquidity within a portfolio can be advantageous: a) the client may have unexpected needs for cash, which could result in serious capital loss if market prices are low; b) it enables clients to take opportunities for adding to holdings at times of distress or panic selling.
3. This is a relatively long time horizon and there is no mention of liquidity requirements, so it is likely that the client is willing to tolerate a medium or high level of risk in the portfolio. In this case, equities are a more appropriate investment than short-term gilts.

Chapter 8 self-test answers

1. By using long-run, historic average returns and volatility data for the major asset classes as the basis of constructing portfolios.
2. Actual (or 'realised') return and volatility over the investment period do not correspond to those assumed in the portfolio modelling process.
3. Cash and gilts.
4. Value investing.
5. Closed-end funds are more volatile because of their gearing and the variations in the discount/premium to NAV.

Chapter 9 self-test answers

1. The MWR for a portfolio would be:

$$\begin{aligned}\text{MWR} &= (426,500 - 384,000 + 16,000)/384,000 \\ &= 0.1523 \\ &= 15.23\%.\end{aligned}$$

2. MWR is used to calculate a valid rate of return for a portfolio, while TWR is used to compare performances of portfolios as the calculation is not distorted by new investment influxes and cash flows.
3. The Sharpe ratio measures the return above the risk-free rate for every unit of risk taken (as measured by the standard deviation). It identifies whether the return on a portfolio is due to the skilful decisions of the manager or the result of taking excessive risk.
4. Jensen's alpha measures the difference between the return you would expect from a security, given its beta, and the return it has actually produced. For a portfolio it is the return that is independent of the market and is a measure of a manager's stock picking skills.
5.
 - a. The information ratio measures the relative return achieved by an investment manager divided by the risk taken relative to a benchmark (tracking error).
 - b. A positive information ratio indicates that the manager has added value through active management.

Statutes

European Savings Directive, 6.1F7A

Finance Act 1998, 6.2H19, 6.2H23

Finance Act 2015, 6.2K4

Financial Services and Markets Act 2000 (FSMA), 6.1C5, 6.1F2, 6.1F5, 6.1G4

Income and Corporation Taxes Act 1988, 6.1G4

Trustee Act 2000, 8L2A

UCITS III, 6.1F4A