International Certificate in Wealth & Investment Management

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This workbook has been written to prepare you for the Chartered Institute for Securities & Investment's International Certificate in Wealth and Investment Management (Certificate in Wealth Management) examination.

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It is estimated that this workbook will require approximately 100 hours of study time.

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Billy Snowdon, Team Leader, Brewin Dolphin

Chapter One

The Financial Services Sector

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This syllabus area will provide approximately 4 of the 100 examination questions

1. The Purpose and Structure of the Financial Services Sector

This chapter offers an introduction to the financial services sector by looking at the purpose of the sector and its main participants before looking at economics and financial markets.

1.1 The Financial Services Sector in the Economy

Learning Objective

1.1.1 Know the function of the financial services sector in the economy: transferring funds between individuals, businesses and government; risk management

The financial services sector is central to the global economy and encompasses a wide and diverse series of activities ranging from banking to insurance, stock markets, venture capital and, of course, the management of wealth.

1.1.1 Financial Services Sector

The scale of the global financial services sector is undoubtedly enormous, and some of the statistics associated with it are of such a size as to render the numbers almost incomprehensible. For example, according to statistics from the Bank for International Settlements (BIS), daily turnover on the foreign **exchange** (FX) market can be in excess of $6 trillion; while the total value of shares quoted on the world's **stock exchanges** exceeded $109 trillion as at December 2023, according to Statista[1].

1 Statista, May 2024. Equity market capitalisation worldwide 2013-2023. Retrieved from https://www.statista.com/statistics/274490/global-value-of-share-holdings-since-2000/ (Accessed: June 2024)

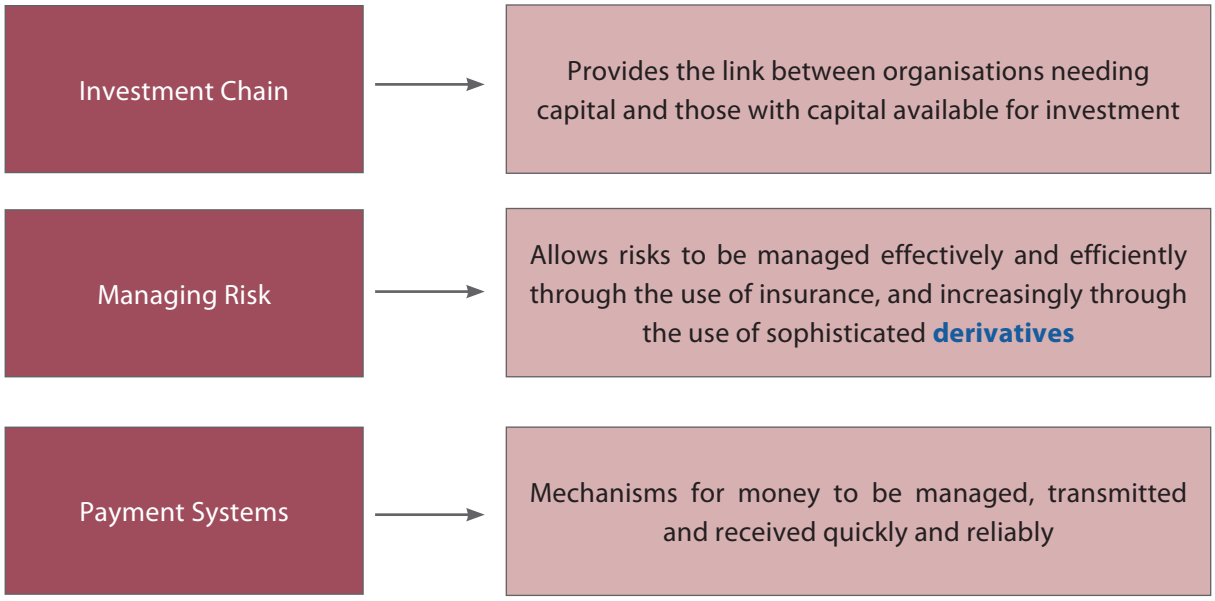
The growth in financial services across the globe has been greatly helped by the extraordinary development and changes brought about by technology, akin to the industrial revolutions in various countries between 1760 and 1900. Over the long term, the combination of rapid technological change and globalisation has generally resulted in low **inflation**, strong growth and rapid proliferation of bond and **equity** markets. Technology has also heralded significant changes in societies, stemming from urbanisation, increasing income inequalities and changing patterns of consumption, especially in the developing world (as can be seen from China and India, for example), resulting in their requirements for financial services.

Some people around the world are moving out of subsistence, towards having disposable income for leisure, and saving and investing for the future and other generations. Hence, there is the need for some sort of financial management, be it simple banking accounts to life assurance products. Governments are also investing substantial amounts in infrastructure, hence the need to raise capital from financial markets.

Financial companies provide a vital economic function in bringing together those with **money** to invest (with the aim of achieving growth or future income) with companies and governments who need capital for investment, expansion or for funding their ongoing operations.

The financial services sector plays a critical role in developed and developing economies, and provides the link between governments/organisations needing capital and those with capital available for investment. For example, an organisation needing capital might be a growing company and the capital might be provided by individuals saving for their retirement in a pension fund. It is the financial services sector that channels money invested to those organisations in need, and which provides transmission, payment, advisory and management services.

The role of the financial services sector can be broken down into three core functions:



In a little more detail, these encompass the following.

Investment Chain	• Through the investment chain, investors and borrowers are brought together, bringing finance to business and opportunities for savers to manage their finances over their lifetime. • The efficiency of this chain is critical to allocating capital to the most profitable investments, providing a mechanism for saving, raising productivity and, in turn, improving competitiveness in the global economy.
Managing Risk	• In addition to the opportunities that the investment chain provides for pooling investment risks, the financial services sector allows other risks to be managed effectively and efficiently through the use of insurance and increasingly sophisticated derivatives, to offset certain exposures or to speculate against events (anticipated or unanticipated). • These tools help businesses cope with global uncertainties as diverse as the value of currencies, the incidence of major accidents or climate events and protect households against everyday events.
Payment Systems	• Payment and banking services operated by the financial services sector provide the practical mechanisms for money to be managed, transmitted and received quickly and reliably. • It is an essential requirement for commercial activities to take place and for participation in international trade and investment. An international example of a payment system is SWIFT, the communications platform that enables its members to exchange financial information securely and reliably and, in so doing, standardise international financial transactions. • Access to payment systems and banking services is a vital component of financial inclusion for individuals, although this does vary country by country and is dependent on whether a country is fully integrated into the global financial system. • At one time, it was the more advanced countries that had the most sophisticated payment systems, but today the use of technology is changing that. In Africa, for example, mobile phones make online banking payment systems accessible to people who previously did not have a bank account.

Across the world, there are disparities in economic development. One of the reasons for this can be linked to how well developed the financial sectors are in a country. For example, deeper financial markets in the US relative to those in Europe are, to a large extent, responsible for the larger increases in productivity and faster pace of industrial innovation. Additionally, better access to private equity and venture capital has had a positive impact on the number of patents in Europe.

Developing countries are increasingly implementing plans to develop their financial services sector as a key pillar of **economic growth**.

Role of the Financial Services Sector in Economic Growth

Research shows that a positive link exists between the sophistication of the financial system and economic growth. A well-developed financial system should improve the efficiency of financing decisions, favouring a better allocation of resources and thereby economic growth.

In conclusion, for the effective running and development of an economy, it is vital that there is a functioning financial system – credit provision; **liquidity** provision; risk management – and to create a marketplace for both buyers and sellers of finance and financial **securities**.

According to the Federal Reserve Bank of San Francisco[2]:

> *'Financial markets help to efficiently direct the flow of savings and investment in the economy in ways that facilitate the accumulation of capital and the production of goods and services. The combination of well-developed financial markets and institutions, as well as a diverse array of financial products and instruments, suits the needs of borrowers and lenders and therefore the overall economy'.*

1.2 Main Institutions and Organisations

Learning Objective

1.1.2 Know activities associated with: wholesale financial markets; retail financial markets

1.1.3 Know the role of the main institutions/organisations: retail banks; investment banks; pension funds; fund managers

1.1.4 Know activities associated with: custodians

The financial services sector comprises a broad range of businesses that provide financial services to governments, businesses and individuals. The range of activities and services undertaken is wide; for example, it ranges from the provision of simple bank accounts to complex structures used for corporate finance, to name just two examples.

As a result of this broad range, having an appreciation of the breadth and scale of the sector is useful so that different services can be placed in context. A starting point is to try and provide an overall structure that services can be allocated to, and to distinguish between wholesale and retail financial markets.

2 Federal Reserve Bank of San Francisco, January 2005. Research & Insights: Please explain how financial markets may affect economic performance. Retrieved from https://www.frbsf.org/research-and-insights/publications/doctor-econ/2005/01/financial-markets-economic-performance/ (Accessed: June 2024)

Wholesale and Retail Markets	
Wholesale Markets	• Wholesale financial markets enable companies, public sector organisations, governments and financial institutions to raise short-term finance and long-term capital to fund growth; undertake domestic and international trade; manage financial and other risks; and pursue investment opportunities. • The effective operation of wholesale markets is critical to both the functioning of retail financial markets and the economy as a whole.
Retail Markets	• Retail financial markets are where companies and firms provide financial services directly to individuals and small businesses. These can range from banking accounts to lending, insurance and wealth management.

In simple terms, the wholesale market can be thought of as the provision of financial services in the business-to-business (B2B) sector, whereas the retail market is the provision of financial services by businesses-to-customers (B2C). The division into these two markets is a useful way to see the sector; however, there are many areas that do not fit neatly into either area, or some straddle the two.

The financial activities that make up the wholesale financial sector include the following:

- **International banking** – cross-border banking transactions.
- **Equity markets** – the trading of quoted shares.
- **Bond markets** – the trading of government, supranational or corporate debt.
- **Foreign exchange** – the trading of currencies.
- **Derivatives** – the trading of **options**, **swaps**, **futures** and **forwards**.
- **Fund management** – managing the investment portfolios of collective investment schemes (CISs), pension funds, insurance funds, hedge funds and private equity.
- **Insurance** – re-insurance, major corporate insurance (including professional indemnity), captive insurance and risk-sharing insurance.
- **Investment banking** – the provision of tailored banking services to organisations, which includes activities such as corporate finance, undertaking mergers and acquisitions, equity trading, fixed-income trading and private equity.

By contrast, the retail sector focuses on services provided to personal customers, including the following:

- **Retail banking** – the traditional range of current accounts (also called checking/chequing, demand deposit or share draft accounts), savings accounts, lending and credit cards.
- **Insurance** – the provision of a range of life insurance and protection solutions for areas such as medical insurance, critical illness, motor, property, income protection and mortgage protection.
- **Pensions** – the provision of investment accounts specifically designed to capture savings during a person's working life and provide benefits on retirement.
- **Investment services** – a range of investment products and vehicles ranging from execution-only stockbroking to full wealth management services and private banking.
- **Financial planning and financial advice** – the service of helping to plan a client's financial future, taking into account mortgages, debts, insurance and pensions.

In many financial centres, however, the picture is complicated by the fact that many large organisations span the whole spectrum of financial services, blurring the traditional boundaries between various products and providers.

1.2.1 Banks and Savings Institutions

In today's financial services marketplace, a range of banks and savings institutions exists to provide a wide variety of deposit, lending and investment products to individuals, businesses or both.

Types of Bank and Savings Institutions	
Retail and Commercial Banks	• These are the typical well-known banks found in most cities and towns that accept deposits and make loans to and from customers and smaller businesses. • Historically, these institutions have tended to operate through a network of branches located in town centres, but increasingly they provide internet-based banking services. • As well as providing traditional banking services, larger retail banks also offer products such as asset management, pensions and insurance, and sometimes execution-only and other broking services. • Traditionally, retail banks offered services and products to individuals, whilst commercial banks dealt directly with businesses. Today, that distinction has become blurred. • Retail and commercial banks are owned by their shareholders; but some may instead be owned by the governments.
Savings Institutions	• In addition to retail and commercial banks, most countries also have savings institutions that started off by specialising in offering savings products to retail customers, but now tend to offer a range of services similar to those offered by banks. • These institutions are known by different names around the world, such as *cajas* in Spanish-speaking countries. In the UK, Australia and New Zealand, they are usually known as 'building societies', recognising the reason why they first came about: they were established in the 19th century when small groups of people would group together and pool their savings, allowing some members to build or buy houses. Japan Post Bank, part of the post office, was the world's largest savings bank until it listed on the Tokyo Stock Exchange in 2015. • Savings institutions are typically jointly owned by the individuals that have deposited or borrowed money from them – the 'members'. It is for this reason that such savings organisations are often described as 'mutual societies'. The major difference between traditional banks and a mutually-owned savings institution relates to its ownership: the latter are owned by the members of the savings institution. • Over the years, many savings institutions have merged or been taken over by larger ones. In the past, a number have transformed themselves into banks that are quoted on stock exchanges – a process known as '**demutualisation**' where the members of the savings institution became shareholders.

Types of Bank and Savings Institutions	
Finance Companies	• Consumer finance companies specialise in providing loans to individuals to finance the purchase of items such as cars or household equipment. Car manufacturers often own specialist lenders so they can help finance the purchase of their cars. • There are also finance companies that specialise in providing finance to businesses – offering loans and other services such as factoring. Factoring is where the company sells its accounts receivables (ie, its unpaid invoices) to the finance company at a discount. The business then receives the cash immediately which will aid its cash flow. • A major difference between finance companies and traditional banks is that banks get some of their funding from accepting deposits, whereas these specialist lenders get their funding from shareholders, banks and the capital markets.

As mentioned in section 1.1, technology is breaking down the barrier to entry that retail banks used to enjoy. This is resulting in new providers, such as internet-based banks challenging the traditional role of the existing banks and savings institutions; technological developments have allowed online banks to offer their banking services without an extensive network of offices. Another term that has entered our lexicon to explain new banks is **challenger banks**; they have been designed to compete with the larger mainstream retail banks, but are seen as nimbler, with fewer products and, most importantly, are not encumbered by legacy issues.

Worldwide, the widespread use of smartphones allows people to receive financial services at their fingertips, as long as an internet connection is available, and payments can be carried out through QR codes, fingerprints and facial recognition. In Asia and Africa, in particular, mobile banking and digital financial services are rapidly expanding, providing previously unbanked populations with access to financial products and services.

In recent years, the banking industry has seen the emergence of competitors to the traditional role of banks in the form of **peer-to-peer lending (P2P)**. In the traditional banking model, banks take in deposits on which they pay interest and then lend out at a higher rate. The spread between the two is where they earn their profit. P2P lending cuts out the banks, so borrowers often get slightly lower rates, while savers get far improved headline rates, with the P2P firms themselves profiting via a fee.

In exchange for accepting greater risk, savers can earn higher returns which can be very useful in periods of low interest rates. Available rates vary depending on the type of borrower that the P2P site lends to and the risk the lender is prepared to accept. The deposit is lent out to individuals and businesses, but it may take time before all of a large deposit is lent out and earning interest. No interest is paid while it is waiting to be lent out. Immediate withdrawals are not always possible and, where they are, may take time and incur a charge or a reduced interest rate.

Rapid growth in financial technology (or 'fintech') has been accompanied by the emergence of **shadow banking**. This term is a general phrase intended to catch a range of non-bank institutions that provide services similar to traditional banks but outside banking regulations. These range from pawnbrokers and finance companies at one end of the sector, to money market funds and specialised investment

vehicles at the other. Regulators worldwide have become increasingly concerned about the risks this poses to the financial system, so they have been taking action to rein in shadow banking to curtail the risks that they can pose.

1.2.2 Investment Banks

Although called 'banks,' **investment banks** operate quite differently from deposit-taking commercial banks.

Investment banks provide advice to and arrange finance for companies that want to float on the stock market, raise additional finance by issuing further shares or **bonds**, or carry out mergers and acquisitions. They also provide trading services for institutions that might want to invest in shares and bonds; in particular, pension funds and asset managers. In addition, investment banks support the trading activities of alternative vehicles such as hedge funds.

Typically, an investment banking group provides some or all of the following services, either in divisions of the bank or in associated companies within the group:

- **Corporate finance and advisory work**, normally in connection with **new issues** of securities for raising finance, **takeovers**, mergers and acquisitions.
- **Banking**, for governments, institutions and companies.
- **Treasury dealing** for corporate clients in currencies, with financial engineering services to protect them from interest rate and **exchange rate** fluctuations.
- **Investment management for sizeable investors**, such as corporate pension funds, charities and high-net-worth private clients (see section 1.3). In larger firms, the value of funds under management runs into many billions of dollars.
- **Securities-trading** in equities, bonds, derivatives and the provision of brokerage and distribution facilities.

Only a few investment banks provide services in all of these areas. Most others tend to specialise to some degree and concentrate on only a few product lines. A number of investment banks have diversified their range of activities by developing businesses such as proprietary trading, servicing hedge funds or making private equity investments, but their ability to do so is restricted or prohibited by regulations such as the Dodd-Frank Act in the US (the Volcker Rule), which was introduced following the global financial crisis of 2007–08.

1.2.3 Pension Funds

Pension funds receive contributions from, or on behalf of, employees and then provide an income on retirement. Pension funds are large, long-term investors in shares, bonds and cash. Some also invest in physical assets such as property. Given their aim of providing a pension on retirement, the sums of money invested in pensions are substantial.

1.2.4 Fund Managers

Fund managers (also known as asset or investment managers) run portfolios of investments for others. They invest money held by pension funds, insurance companies, high-net-worth individuals (HNWIs) and others. Some are independent companies; others are divisions of larger entities such as insurance companies or banks. Fund managers will buy and sell shares, bonds and other assets in order to achieve specific investment objectives (eg, to increase the value of their clients' portfolios, generate an income, or manage risk).

Fund managers manage portfolios for different types of client with widely varying sizes of funds. For convenience, they can be subdivided into three main types reflecting the market they are serving as shown below.

Institutional Fund Managers	• Institutional fund managers work on behalf of institutions; for example, investing money for a company's corporate pension fund or an insurance company's fund.
Mutual Fund Managers	• These fund managers operate mutual funds that are available to the general public to invest in, often with relatively low initial investment amounts. • Mutual funds are known by various names in different countries including **unit trusts** and open-ended investment companies (OEICs) in the UK, and *société d'investissement à capital variable* (SICAV) in Europe. A more general term for mutual funds is collective investment schemes (CISs).
Discretionary Fund Managers	• These are sometimes called private client fund managers or portfolio managers to make the distinction of managing individual portfolios for private clients. These may be portfolios that are bespoke to the client or model portfolios.

Obviously, institutional funds typically provide the fund managers with larger sums of money than do retail or private clients, although retail pooled pension funds can rival institutional mandates for size.

Fund managers make a profit by charging their clients' money for managing portfolios. The charges are often based on a small percentage of the fund being managed, although some charge a fixed fee.

1.2.5 Custodians

Custodians are banks that specialise in safe custody and asset services, looking after securities, eg, shares and bonds on behalf of others such as fund managers, pension funds and insurance companies.

The activities they undertake include the following:

- Safekeeping of assets such as equities and bonds.
- Arranging settlement of any purchases and sales of securities.
- Asset servicing – collecting income from securities, such as bonds and equities of the actual **underlying** companies. The custodian pays this income out to either the client holders themselves,

or to the wealth management house which then pays to their client accounts. Other services include processing corporate actions.
- Providing information on the underlying companies and their **annual general meetings (AGMs)** and extraordinary general meetings (EGMs) to their clients.
- Managing cash transactions.
- Performing foreign exchange (FX) transactions where required.
- Providing regular reporting on all their activities to their clients.
- Reconciliations of assets held to tally with what the funds expect that they are holding. This function is also called trade support.

They may also offer other services to their clients, such as measuring the performance of the portfolios and maximising the return on any surplus cash. Custodians, like fund managers, make money by charging fees for their services.

In common with both fund managers and stockbrokers, some custodians are independent while others are divisions of larger entities, such as investment banks. Custodians can operate either domestically, regionally or globally:

- Global custodians, such as Bank of New York Mellon (BNY) and State Street, provide custody services in most markets by either having a branch in the market or using a local agent.
- A regional custodian provides specialist services across a region, as the global custodian HSBC Securities Services does, for example, in Asia and the Middle East.
- Local custodians focus on providing custody services within a specific market or country, offering expertise and support tailored to local regulatory requirements and market practices.

1.3 Wealth Management

Learning Objective

1.1.5 Understand the roles of investment management and financial planning in the wealth management sector: investment managers; financial planners; private banks; platforms

Wealth management refers to the provision of financial services to clients, in line with their financial goals and risk tolerance (among other considerations). As we have already seen, it includes the provision of financial advice as there has been a move to integrate financial advice and investment management. Hence, for some years, the sector experienced a consolidation of those two sectors that were previously separate services.

Wealth management delivers a wide range of services that enable an individual to manage their financial affairs and assets effectively, such as:

- tailored banking products
- investment management
- secured lending against investment portfolios to allow them to be leveraged
- investment products in areas such as foreign exchange (FX), structured investments, property and **alternative investments**

- trusts and estate management
- tax planning, and
- estate planning.

The provision of these services is typically segmented according to wealth.

The value applied to define each segment will clearly change from market to market, but the following gives an indication of the asset profile of individuals making up each segment:

- **Mass affluent** – investable assets over $100,000.
- **High-net-worth individuals (HNWIs)** – investable assets of over $1 million.
- **Very-high-net-worth individuals (VHNWIs)** – investable assets of over $5 million.
- **Ultra-high-net-worth individuals (UHNWIs)** – investable assets of over $30 million.

The latest World Wealth Report published by Capgemini estimated that the value of assets managed on behalf of HNWIs exceeded $86.8 trillion[3]. HNWI wealth remains on course to reach $100 trillion by 2025.

1.3.1 Financial Planning

The role of the wealth manager will vary depending on the value of the client's assets and the services offered by the firm they work for. The areas in which a wealth manager may get involved on behalf of a client include financial planning, tax planning, investment management, asset protection and estate planning, to name just a few of the main areas of advice. This wide spectrum means that a wealth manager may be the primary contact for the client and sub-contract other activities to specialists.

Wealth management involves an ongoing service to clients, and includes both financial planning and the provision of appropriate solutions. Financial planning is covered in more detail in chapter 7, section 1.3. The solutions developed from the financial planning process may include the selection of investments, investment management, protection products and estate planning, and each of these is considered in later chapters of this workbook.

1.3.2 Wealth Management Providers

Wealth management refers to a financial service that addresses the investment, tax, protection and estate planning needs of a client. It therefore goes beyond financial planning or investment management by taking a holistic view of a client's needs and developing solutions to meet those needs.

The type of services offered and the minimum amount of funds needed for the service will differ not only from country to country, but from firm to firm depending on their area of specialism. It is a service offered by private banks, stockbrokers, subsidiaries of banks and increasingly by financial planning firms.

Financial Advisers

A financial adviser is one that can provide a financial planning service that may look at a client's entire financial position including budgeting, savings, investments, mortgages and tax planning. Some provide holistic advice for a client's entire affairs, while others specialise in certain areas. When

3 Capgemini, 2024. World Report Series 2024. Retrieved from https://www.capgemini.com/wp-content/uploads/2024/05/WWR_2024_web.pdf (Accessed: June 2024)

providing financial advice, a financial advisory firm may offer independent advice where they select products and solutions from the best available in the market or they may be restricted to the products of one or just a few product providers.

Typically, they do not manage investment portfolios for clients and instead select a fund manager or a series of mutual funds to meet their clients' needs. Increased competition, cost pressures and the need to improve service offerings have, however, seen many financial advisory firms change their business model to operate more like a typical wealth manager and manage a client's assets themselves or using an investment platform.

Commercial Banks

Commercial banks often offer wealth management services similar to financial advisers for mass market customers. They will often cover the same range of services and may be either independent advisers or be restricted in the advice they offer.

Wealth Managers

There are a number of other firms that fall within the description of wealth managers, such as stockbrokers and fund managers.

A stockbroker buys and sells securities on a stock exchange for its clients. Some stockbroking firms restrict their activities to just this type of activity, but many in the retail field have evolved over the years to manage investment portfolios for clients, so the transition to managing a client's overall wealth position has been a natural extension.

Wealth managers manage portfolios on behalf of clients on either a discretionary or an advisory basis. Discretionary asset managers make investment decisions on behalf of their clients without needing prior approval for each transaction, while advisory managers provide recommendations but leave the final decision to the client. Many of these professionals have been active in this field for years, making them well-suited to the wealth management structure. They often act as wealth managers or asset managers for other firms.

Private Banking

Where financial advisers and commercial banks have typically catered to the mainstream retail customer market, private banks have traditionally focused on the wealthier end of the market and restricted their services to the wealthy or very wealthy.

This kind of service is usually offered to HNWIs on an individual, bespoke basis. Originally, it covered only banking services, but it now includes wealth advice and management. Private banks provide a wide range of services for their clients including wealth management, estate planning, tax planning, insurance, lending and lines of credit. Their services are typically targeted at clients with a certain minimum sum of investable cash or a minimum net wealth.

Private banking is offered both by domestic banks and by those operating offshore. In this context, offshore banking means banking in a different jurisdiction from the client's home country – usually one with a favourable tax regime.

Family Offices

A single-family office acts as an advisory and wealth manager to a single ultra-high-net-worth family. A multi-family office helps multiple families with advice and wealth management services – this type of family office has become more popular in recent years, as it allows for the cost sharing of investment and consulting expenses.

Family offices offer a range of services beyond investment advice and management including philanthropic advice, estate planning, tax services, insurance, household management and private school arrangements. They often also provide services to family-owned businesses, advising on issues such as governance and business management. Many major wealth management firms offer a boutique service to international family offices and private investment offices.

Private Investment Offices

Private investment offices are independent firms, usually structured as a partnership, where partners invest their money alongside clients. Like family offices, they tend to focus on the upper end of the wealth scale. However, as the name suggests, they deal solely with the investment affairs of clients. They offer **asset allocation** and bespoke investment management services which may be handled in-house or by external advisers.

A private investment office manages risks, conducts due diligence and employs measures to prevent fraud (eg, by implementing robust security measures), all while maintaining oversight of asset allocation; it seeks long-term investment results for the families and its individuals members. Again, they tend to remain independent as they seek best-of-breed solutions for a client.

1.3.3 Portfolio Management

A wide range of firms provide wealth management services to clients, each of which specialise in different segments of the market. Each of these firms will usually undertake portfolio management (also called investment management). Portfolio management is the management of an investment portfolio on behalf of a private client or institution with a primary focus on meeting their investment objectives. Portfolio management can be conducted on the following bases:

- **Discretionary basis** – where the portfolio manager makes investment decisions within parameters agreed with the client. This means that the portfolio manager can deal and manage the portfolio on the client's behalf without referring to the client beforehand. Clients may wish to use this type of service if they are too busy or not experienced enough to look after their investments, and prefer to use the investment experience of a firm providing these services.
- **Advisory or non-discretionary basis** – a portfolio manager (or via a client relationship manager) would recommend an ongoing investment strategy and changes, but ultimately all the decisions would need to be made by the client, as it is the client who leads the investment management and simply relies on the investment management firm for investment advice, execution and settlement. The client is under no obligation to take this advice, although they do pay a fee for this. There are two types of advisory service:
    - **Dealing with advice** – the firm advises on individual transactions, but does not have responsibility for the overall account or portfolio of the client.

  - **Advisory portfolio management** – the firm acts as the investment manager for the client and accepts responsibility on a continuing basis for advising on the composition of the account or portfolio. This is more similar to discretionary management.
- **Execution-only basis** – one where no advice is given to the client and the firm simply undertakes the transaction. In such cases, the transaction is carried out on the instructions of the customer and no advice is provided about the suitability of the course of action or product. For the investor who knows what they want and how to obtain the best terms, it will be the cheapest service.

For discretionary and advisory management, the portfolio manager usually has the choice of investing directly in a range of asset classes and/or indirectly via collective investment funds. This is a simplified explanation, though – the provision of a wealth management service would include understanding what the client requires, fact-finding information, an understanding of the client's risk tolerance and expected returns to meet certain goals or future events, and taking account of their investment timeline/horizon.

1.3.4 Platforms

Platforms are online services used by intermediaries, such as **independent financial advisers (IFAs)**, to view and administer their clients' investment portfolios. They offer a range of tools which allow advisers to see and analyse a client's overall portfolio and to choose products for them. As well as providing facilities for investments to be bought and sold, platforms generally arrange custody for clients' assets.

Platforms enable advisers to take a holistic view of the assets that a client has in a variety of accounts. Advisers also benefit from using these accounts to simplify and bring some level of automation to their back office using internet technology.

Platform providers also make their services available direct to investors, and platforms earn their income by charging for their services. The advantage of platforms for fund management groups is the ability of the platform to distribute their products to financial advisers.

1.3.5 Wealth Management and Technology

Wealth management is going through a prolonged period of significant change. Changing client needs, stricter regulations, and technological advancements continue to rapidly transform the market. Technology is embedded in everything we do, changing the way we live, work, and experience the world. Advances in technology have radically altered how we use the internet and communicate, and are disrupting traditional industries.

Fintech is disrupting the traditional wealth management industry and requiring the development of digital wealth services and platforms. People across many generations are now digitally proficient and they desire constant access to sophisticated tools and services, and clients of wealth management firms are no different. Below, we look at some of the developments affecting the wealth management sector.

Communications

Today, we communicate with the latest apps around the globe or buy online based on the artificial intelligence (AI) recommendations of digital providers.

Wealth management clients now expect comprehensive digital infrastructure capabilities, similar to those in the retail industry. For firms willing to embrace these advancements, the benefits are abundant: enhanced operational efficiency, deeper client engagement, and a significant competitive edge in an increasingly digitalised industry.

Alongside these opportunities come challenges, though, particularly in cybersecurity and regulatory compliance. The ever-present threat of cyberattacks necessitates robust security measures to safeguard sensitive financial data and uphold client trust; and this is an area that regulators worldwide are increasingly focusing on and tightening regulators, to ensure the integrity and security of financial systems.

Online Solutions

The rise of digital wealth management has led clients to take their experience online, creating multiple contact points needing streamlining. The coronavirus (COVID-19) pandemic has resulted in an acceleration of this trend.

In-person interactions and consistency remain crucial, as few are comfortable with a fully digital model. This calls for improved connectivity between the client and their adviser across all contact points. Additionally, with the interaction between clients and wealth managers moving from voice conversations to messenger-based communications, this will require an unanticipated level of compliance to monitor all interactions between advisers and clients.

Robo-Advice

Robo-advice is the application of technology to the process of providing financial advice, but without the involvement of a human financial adviser. Robo-advisers are able to provide wealth management advice with the use of algorithms, and some are even able to make financial transactions on the client's behalf. A prospective investor enters data and financial information about themselves, and the system then uses an algorithm to score the information and decide what investments should be chosen. The system then presents an investment strategy, which is usually passively focused around index funds or exchange-traded funds (ETFs), and allows easy implementation.

Robo-advisors can be suitable for a range of investors – from beginners, who do not yet have the financial knowledge to make informed investment decisions; to professionals, who may not have the time to actively manage their own portfolio. They can also be a solution for investors with simple strategies, or those who do not wish to hire a financial adviser, but at the same time have little desire in selecting their own investments. On the other hand, automated portfolio management solutions may not be ideal for investors who prefer human assistance or need a more tailored approach, as well as those with multiple investment accounts.

Note that robo-advisors must be registered with the appropriate financial regulatory authorities, and are subject to the same rules and regulations as human advisers. Compliance requirements ensure that they meet the necessary standards for providing financial advice and managing investments.

End of Chapter Questions

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

1. **What role does the investment chain perform?**
   Answer reference: Section 1.1

2. **How does a traditional bank differ from a mutually-owned savings institution?**
   Answer reference: Section 1.2.1

3. **Who are the typical customers of an investment bank?**
   Answer reference: Section 1.2.2

4. **Which market participant is responsible for the safekeeping of assets?**
   Answer reference: Section 1.2.5

5. **How does discretionary investment management differ from advisory investment management?**
   Answer reference: Section 1.3.3

6. **What is a platform?**
   Answer reference: Section 1.3.4

Chapter Two

Industry Regulation

1. **Financial Services Regulation** 21
2. **Financial Crime** 28
3. **Ethical Standards** 37

This syllabus area will provide approximately 5 of the 100 examination questions

1. Financial Services Regulation

Learning Objective

2.1.1 Know the objectives and benefits of regulation; the main differences between rules-based and principles-based approaches to financial regulation; the role of the main international regulatory organisations; how regulations are implemented at a national level; and the importance of ethical standards

With the increasing globalisation of financial markets, there is a demand from governments and investment firms for a common approach to regulation in different countries. As a result, there is a significant level of cooperation between financial services regulators worldwide and, increasingly, common standards, **money laundering (ML)** rules probably being the best example.

In this section, we will start by looking at the purpose and benefits of regulation, the types of model encountered, as well as looking at the role of international regulatory organisations.

1.1 Purpose and Benefits of Regulation

Effective financial markets are an essential part of developed and developing economies. They fuel economic development and aid wealth creation. As a result, confidence and trust in these markets is vital; lack of confidence and trust can adversely impact customers and the economy.

Due to the inherent risk of monetary loss in many financial transactions, financial markets require rules and codes of conduct to protect investors and the general public. A key characteristic of financial markets is therefore a set of standards, rules and codes of conduct to define standards of acceptable conduct by regulated firms and individuals.

The objectives and benefits of regulation are typically achieved through a combination of law and regulation. Regulation is a combination of rules and standards generally covering matters such as observing proper standards of market conduct, managing conflicts of interest, the fair treatment of customers, and ensuring the suitability of customer advice.

Objectives and Benefits of Regulation

The objectives and benefits of regulation can be summarised as follows:

- Increasing the confidence and trust in financial markets, systems and products.
- Establishing an environment to encourage economic development and wealth creation.
- Reducing the risk of market and system failures including their economic consequences.
- Enhancing consumer protection by giving them the reassurance they need to save and invest.
- Reducing **financial crime** by ensuring financial systems cannot easily be exploited.

1.2 Models of Regulation

Originally, financial markets operated using self-regulation, but over time different models of self-regulation have evolved. The main types are rules-based and principles-based, with self-regulatory organisations (SROs) having a role in both approaches.

Models of Regulation	
Rules-Based	• This approach involves a high degree of prescriptive procedures including very detailed rules stipulating what firms and the individuals within them must do to ensure they comply. • A rules-based approach requires a strict adherence to precise rules with little allowance for interpretation. • It provides regulatory certainty, but it is typically inflexible and may result in a tick-box exercise. • For regulators, maintaining a comprehensive rules-based model is challenging, particularly in evolving and fast-changing markets.
Principles-Based	• In this approach, the focus is on principles and therefore the types of behaviour and outcomes, as opposed to just following the rules. • Principles-based regulation acknowledges that firms and individuals are different and adopt different approaches – by applying principles rather than hard and fast rules, the regulator allows firms to make their own decisions about their operating model. • This means that firms do not have to slavishly follow prescriptive rules, and can decide how they want to meet a principle – as long as they can justify their approach (and it aligns with the principle), then there is scope for different approaches and principles-based regulation can work well.

Models of Regulation	
Principles-Based	• The challenge faced by regulators is ensuring that firms apply consistent interpretations to their implementation of the principles, and the challenge faced by firms is to ensure that their approach is both consistent with the framework and achieves the goals of the principles.
Self-Regulatory Organisations (SROs)	• SROs have a key role to play in effective regulation, as recognised by the International Organization of Securities Commissions (IOSCO): '*Self-regulatory organisations (SROs) can be a valuable component to the regulator in achieving the objectives of securities regulation*'. • Many different forms of self-regulation exist for financial markets such as industry self-regulatory organisations, exchange self-regulatory frameworks and professional bodies. • In the financial services sector, self-regulation is typically a unique combination of private interests with government oversight, which is recognised as having delivered an effective and efficient form of regulation for the complex and dynamic environment. • A key example of significant SRO is the Financial Industry Regulatory Authority (FINRA) in the US, an industry body through which financial firms self-regulate. • In some countries (such as in the UK), the functions of SROs are carried by the government or a government-controlled entity.

As financial markets have become increasingly global in nature and interdependence has grown, the financial sector has moved from self-regulation alone to a statutory approach. This has facilitated international cooperation and the development of improved and common standards.

1.3 International Regulatory Bodies

As the financial services sector becomes increasingly international, many regulations and laws have application beyond national borders, and there is increasing cooperation between international regulatory authorities and national regulators.

In this section, we will look at the role of some of the main international bodies.

1.3.1 Bank for International Settlements (BIS)

The Bank for International Settlements (BIS) is based in Switzerland, and is owned by 60 **central banks** from around the world. It acts as the 'central bank' for central banks and does not accept deposits from, or provide financial services to, private individuals or corporate entities.

Its role is to serve central banks in their pursuit of monetary and financial stability and to foster international cooperation in those areas. It is perhaps best known for the Basel Accords that set the capital adequacy standards for banks worldwide.

The BIS promotes international cooperation among monetary authorities and financial supervisory officials through its meetings programmes and through the Basel Process. The Basel Process refers to the committees it hosts that have a key role in helping to strengthen the stability and resilience of the global financial system. These include the following:

- **Basel Committee on Banking Supervision (BCBS)** – develops global regulatory standards for banks and seeks to strengthen micro- and macro prudential supervision of financial institutions.
- **Committee on the Global Financial System (CGFS)** – monitors and analyses issues relating to financial markets and systems.
- **Committee on Payments and Market Infrastructures (CPMI)** – establishes and promotes global regulatory/oversight standards for payment, clearing, settlement and other market infrastructures, and monitors and analyses developments in these areas.

The outcome of the Basel Process is internationally agreed guidance. International agreement is the precondition for globally consistent standards produced by the standard-setting committees, but it does not substitute for national legislation. In order to become binding, the agreements reached in Basel have to be approved and implemented at the national level, following due regulatory and legislative processes in each individual jurisdiction.

1.3.2 Financial Stability Board (FSB)

The Financial Stability Board (FSB) is an international body with a mandate from a number of governments to monitor and make recommendations about the global financial system. It supports the development and implementation of internationally accepted economic, financial and statistical standards that can help promote sound domestic financial systems and international financial stability. Notably, one of its objectives is to assess vulnerabilities affecting the global financial system and the actions needed to address these risks.

Its decisions are not legally binding on its members – instead, the organisation operates by moral suasion and peer pressure, in order to set internationally agreed policies and minimum standards that its members commit to implementing at national level.

1.3.3 International Organization of Securities Commissions (IOSCO)

IOSCO is an international association of securities regulators created in 1983. It has 38 principles of securities regulation (supported by the G20 and the Financial Stability Board (FSB)), which are grouped into ten categories as follows:

1. Relating to the Regulator
2. Self-Regulation
3. Enforcement of Securities Regulation
4. Cooperation in Regulation
5. Issuers
6. Auditors, Credit Rating Agencies (CRAs) and other Information Providers
7. Collective Investment Schemes (CISs)
8. Market Intermediaries
9. **Secondary Market**
10. Clearing and Settlement

These principles do not have any legal force themselves but need to be practically implemented under the relevant legal framework in member countries. They are based on three objectives of securities regulation:

1. The protection of investors.
2. Ensuring that markets are fair, efficient and transparent.
3. The reduction of systemic risk.

Through IOSCO's international forum, regulators cooperate in the development and enforcement of standards and surveillance of international transactions. They use IOSCO structures to do the following:

- Cooperate to promote high standards in securities regulation and develop a level of conformity in such regulation.
- Exchange information to promote development of markets.
- Unite their efforts to establish standards and effective surveillance of international securities transactions.
- Provide mutual assistance to promote integrity of markets by a rigorous application of standards and by effective enforcement against offences.

1.4 National Regulators

Governments are responsible for setting the role of regulators and, in so doing, will ensure that international best practice is followed through the adoption of IOSCO objectives and principles and by cooperation with other international regulators and supervisors.

Below, we look at how this has been translated into the regulatory structure in a selection of countries. In each country, there is often more than one regulatory body, so we will focus on those most directly affecting securities markets and the provision of wealth management services.

National Regulators	
US	• Given the size and maturity of the US financial system, it is unsurprising that responsibility for financial regulation is spread across many regulators. Among the most well-known are the Federal Reserve and the Securities and Exchange Commission (SEC). • The Federal Reserve, commonly known as the Fed, plays a central role in the US financial system. It serves as the nation's central bank, tasked with conducting **monetary policy**, supervising and regulating banks, and maintaining the stability of the financial system. Its actions (eg, setting interest rates and regulating the money supply) have profound impacts on the economy and financial markets, making it a key player in shaping the nation's economic landscape. • The SEC is an independent government agency tasked with overseeing US securities markets, enforcing securities law, and monitoring market exchanges. The SEC oversees the key participants in the securities world, including securities exchanges, securities brokers and dealers, investment advisers, and mutual funds. • The FINRA is an industry SRO through which financial firms self-regulate.

National Regulators	
European Union (EU)	• A key feature of the EU is its single market in financial services. European legislation involves a directive passed by the European Council and European Parliament, which is then turned into detailed rules before being implemented at a national level in each EU state. • The regulation of financial services across Europe is overseen by three supervisory authorities – the European Banking Authority (EBA), the European Securities and Markets Authority (ESMA) and the European Insurance and Occupational Pensions Authority (EIOPA). • ESMA, which deals with regulation of securities and markets, has three objectives – investor protection, orderly markets and financial stability. One of its key roles is to develop the technical standards that national regulators in EU countries use to implement EU Directives. It also issues guidelines such as the requirement for financial services staff to obtain certain appropriate qualifications to be able to perform their role. • The EBA focuses on ensuring effective regulation and supervision of banking activities across the EU, promoting the stability and integrity of the banking sector. Meanwhile, EIOPA is responsible for regulating and supervising insurance and pension sectors across the EU, ensuring consumer protection and financial stability within these industries.
China	• China established the Financial Stability and Development Committee (FSDC) in 2017 as a super financial regulator. Its role is to coordinate the overall strategy for the financial sector and supervise China's monetary policy and financial regulation. It coordinates the activities of the People's Bank of China (PBC, also PBOC or PBoC) and the China Banking Insurance Regulatory Commission (CBIRC). • As the central bank of China, the PBC is responsible for implementing monetary and exchange rate policy and the CBIRC supervises the establishment and ongoing business activities of banking and insurance businesses.
Middle East	• The Middle East contains a number of countries with different regulators. • Financial services regulation in Saudi Arabia is split between two regulatory bodies. The Saudi Central Bank supervises the banking system, insurance companies and exchange dealers. The Capital Markets Authority's (CMA)'s role is to regulate and develop the local capital market. • UAE and Qatar have growing financial services sectors and a number of financial regulators, especially in financial free zones, such as the financial regulators of the Dubai International Financial Centre (DIFC) and the Abu Dhabi Global Markets (ADGM). Regulators in these free zones have looked to adopt best practices from other regulators such as the EU, UK and Australia.

National Regulators	
UK	• In the UK, the two main regulators are the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA). • The PRA is part of the **Bank of England (BoE)**, the UK's central bank, and is responsible for the financial soundness of deposit-taking institutions, insurers, and significant investment firms. • The FCA is responsible for the conduct of all firms and the prudential regulation of firms not supervised by the PRA. The FCA focuses on the day-to-day regulation of all firms in retail and wholesale financial markets, as well as the infrastructure that supports these markets.

As you will see from the above table, there are different regulatory structures in each country ranging from a single integrated financial regulator, the separation of prudential and conduct supervision between different regulators, to a sector-based regulatory model.

Financial institutions that want to establish themselves in a jurisdiction typically need to apply for a licence. Regulators will ensure that minimum entry standards are applied and approve those applications where it is certain that the firm will be sensibly managed with a viable business model and effective controls for risk mitigation. This could lead to a regulator imposing limitations and requirements on any part of the business model or even refusing to authorise a firm and grant permission for it to undertake regulated activities.

The methods used by regulators will typically involve the following:

- The setting of prudential requirements to ensure that an authorised firm or person maintains sufficient capital resources commensurate with the level of risk they are running.
- Establishing business conduct rules, evidential provisions and guidance that will govern an authorised firm's relationship with its customers or counterparties.
- Providing detailed product regulations often in the areas of retail products, such as CISs and pensions, which set minimum standards aimed at the protection of retail investors and establish dispute resolution and compensation arrangements.
- The setting of requirements and processes for investigation, supervision and enforcement of the rules.
- The setting of requirements for minimum numbers of qualified staff and criteria ensuring key staff is fit and proper for their roles.

Regulators will seek to maintain arrangements to supervise compliance with the requirements imposed on authorised persons. Due to the number of firms for which a regulator may be responsible, the regulator must consider how to align its resources with the risks each firm may pose to market stability. Where its risk assessments indicate that a firm may pose a risk to the regulator's objectives, then its approach may be one of intensive oversight.

Regulators have a range of tools they can use to aid their supervision of regulated firms. Typically, these are as follows:

- **Diagnostic tools** – designed to identify, assess and measure risk.
- **Monitoring tools** – to track the development of identified risk, wherever it arises.
- **Preventative tools** – to limit or reduce identified risks and so prevent them happening or increasing.
- **Remedial tools** – to respond to risks when they have happened.

The complex character of securities transactions and the sophistication of fraudulent schemes require strong and rigorous enforcement of securities laws. Investors in the securities markets are particularly vulnerable to misconduct by intermediaries and others. This means that regulators should, therefore, have comprehensive investigatory and enforcement powers and, where necessary, cooperate with other regulators where there are cases of cross-border misconduct.

2. Financial Crime

Financial crime broadly includes activities involving fraudulent or dishonest behavior with the goal of financial gain or using or legitimising illegally acquired assets. There is no single definition of financial crime, but it encompasses any kind of criminal conduct relating to money or to financial services or markets. Some of the main types of financial crime include bribery and corruption, fraud, tax evasion, cybercrime, identity theft, money laundering, terrorist financing, market abuse and insider trading, and handling the proceeds of crime.

Reducing financial crime is a key priority for regulators, authorities and governments globally. Organised crime groups, terrorists and fraudsters are increasingly using sophisticated international networks and financial systems to move or store funds and assets or commit fraud. Financial institutions are particularly vulnerable due to the nature of their businesses and the volume of transactions and client relationships they manage.

2.1 Money Laundering and Terrorist Financing

Money laundering (ML) is the process of turning dirty money (money derived from criminal activities) into money that appears to be legitimate. Dirty money is difficult to invest or spend and carries the risk of being used as evidence of the initial crime. Clean money can be invested and spent without risk of incrimination. Money laundering disguises the proceeds of illegal activities as legitimate money that can be freely spent. Increasingly, anti-money laundering (AML) provisions are being seen as the front line against drug dealing, terrorism and organised crime.

Money laundering can take many forms, including:

- turning money acquired through criminal activity into clean money
- handling the proceeds of crimes such as theft, fraud and tax evasion
- handling stolen goods
- being directly involved with, or facilitating, the laundering of any criminal or terrorist property, and
- criminals investing the proceeds of their crimes in a whole range of financial products.

There can be considerable similarities between the movement of terrorist funds and the laundering of criminal property. Because terrorist groups can have links with other criminal activities, there is inevitably some overlap between AML provisions and the rules designed to prevent the financing of terrorist acts. However, these are two major differences to note between terrorist financing and other money laundering activities:

- Often, only quite small sums of money are required to commit terrorist acts, making identification and tracking more difficult.
- If legitimate funds are used to fund terrorist activities, it is difficult to identify when the funds become 'terrorist funds'.

However, terrorist organisations can require significant funding and will employ modern techniques to manage their funds and transfer them between jurisdictions, hence the similarities with money laundering.

2.1.1 International Approach to Combating Money Laundering

Learning Objective

2.2.1 Know the role of the Financial Action Task Force (FATF)

The cross-border nature of money laundering and terrorist financing has led to international coordination to ensure that countries have the legislation and regulatory processes in place to enable identification and prosecution of those involved. Examples include the following:

- The Financial Action Task Force (FATF) has issued recommendations aimed at setting minimum standards for action in different countries to ensure AML efforts are consistent internationally; it has also issued special recommendations on terrorist financing.
- Standards issued by international bodies to encourage due diligence procedures to be followed for customer identification.
- Sanctions by the United Nations (UN) and individual countries to deny individuals and organisations from certain countries access to the financial services sector.
- Guidance issued by the private sector Wolfsberg Group of banks in relation to private banking, correspondent banking and other activities. The Wolfsberg Group is an association of 13 global banks that was established in response to growing concerns about money laundering and financial crime. Their frameworks, guidance and recommendations are often used by financial institutions to inform their own policies and procedures in combating financial crime.

The FATF

In response to growing international concerns over money laundering, the FATF on money laundering was created by a G7 summit in 1989. The FATF develops international standards for combating money laundering and terrorist financing, with their implementation regularly reviewed by audits of national systems. Its recommendations have been implemented by over 200 countries and jurisdictions worldwide.

The FATF focuses on three principal areas:

- Setting standards for national anti-money laundering (AML) and counter-terrorist financing (CFT) programmes.
- Evaluating how effectively member countries have implemented the standards.
- Identifying money laundering and terrorist financing methods and trends.

The FATF has established four regional groups covering the Americas, Asia Pacific, Europe, and the Middle East and Africa. Using input from these groups, the FATF has undertaken an exercise to identify countries with inadequate AML measures, referred to as 'non-cooperative countries and territories'. Its purpose has been to put pressure on those countries to bring their AML systems up to international standards.

The FATF monitors members' progress in implementing necessary measures, reviews money laundering and terrorist financing techniques and countermeasures, and promotes the adoption and implementation of appropriate measures globally. In performing these activities, FATF collaborates with other international bodies involved in combating money laundering and the financing of terrorism.

Role of Other International Agencies

A number of other international agencies are actively involved in combating money laundering and the financing of terrorism.

United Nations (UN)	• The United Nations Office on Drugs and Crime (UNODC) has a mandate to assist member states in combating illicit drugs, crime and terrorism. To achieve this, the UNODC offers technical assistance and training to member states to strengthen their legal and institutional frameworks, among other measures. • The UN promotes and enforces international conventions such as the United Nations Convention against transnational organized crime (TOC) and the International Convention for the Suppression of the Financing of Terrorism. These conventions obligate signatories to criminalise money laundering and terrorism financing, and implement measures to freeze terrorist assets.
International Monetary Fund (IMF)	• The IMF's broad experience in conducting financial sector assessments, providing technical assistance in the financial sector, and exercising surveillance over members' economic systems has been particularly helpful in evaluating countries' compliance with the international AML/CFT standard and in developing programmes to help them address identified shortcomings. • Its Financial Sector Assessment Program (FSAP) of countries and its Offshore Financial Centers Assessment incorporates a full AML/CFT assessment.

World Bank	• Emerging markets are increasingly becoming the venue for large-scale money laundering operations. If left unchecked, this activity will eventually undermine the credibility of the formal financial sector. • The World Bank is involved in supporting developing countries and in its financial sector operations. It promotes measures to counter the flow of illicit funds into the financial systems of countries and arranges for external assistance. • The Stolen Asset Recovery Initiative (StAR) is a partnership between the World Bank Group and UNODC that supports international efforts to end safe havens for corrupt funds. StAR works with developing countries and financial centres to prevent the laundering of the proceeds of corruption and to facilitate a more systematic and timely return of stolen assets to their country of origin.

2.1.2 Money Laundering Offences and Firms' Regulatory Obligations

Learning Objective

2.2.2 Know the main offences associated with money laundering and terrorist financing and the regulatory obligations of financial services firms

While the specific rules and regulations in relation to money laundering will vary from country to country, it is worth noting that there are common features in the types of offences and the regulatory obligations placed on financial services firms.

The five main types of offences involved in money laundering are as follows:

- **Concealing** – it is an offence for a person to conceal or disguise criminal property.
- **Arrangements** – it is an offence for a person to enter into an arrangement that they know, or suspect facilitates the acquisition, retention, use or control of criminal property for another person.
- **Acquisition, use and possession** – it is an offence to acquire, use or have possession of criminal property.
- **Failure to disclose** – three conditions need to be satisfied for this offence:
  - The person knows or suspects (or has reasonable grounds to know or suspect) that another person is laundering money.
  - The information giving rise to the knowledge or suspicion came to the person during the course of business in a regulated sector (such as the financial services sector).
  - The person does not make the required disclosure as soon as is practicable.
- **Tipping off** – it is an offence to tell a person that a disclosure of a suspicion has been made.

Money laundering regulations usually place requirements on firms that cover three main areas:

- Firms are required to carry out certain identification procedures, implement certain internal **reporting procedures** for suspicions and keep records in relation to AML activities.

- The regulations also require firms to train their staff adequately in the regulations and how to recognise and deal with suspicious transactions.
- There is a catch-all requirement that firms should establish internal controls appropriate to forestall and prevent money laundering. This includes the appointment of an employee as the firm's money laundering reporting officer (MLRO).

The term, 'MLRO' is used in various international rules to refer to the person responsible for overseeing a firm's anti-money laundering activities and programme. They are responsible for:

- receiving reports of suspicious activity from any employee in the business
- considering all reports and evaluating whether there is – or seems to be – any evidence of money laundering or terrorist financing
- filing reports of any suspicious activity or transactions with the appropriate law enforcement agency by completing and submitting a suspicious activity report (SAR), and
- asking the law enforcement agency for consent to continue with any transactions that they have reported and making sure that no transactions are continued illegally.

Management and officers of firms that fail to comply with a country's money laundering regulations are potentially liable to a jail term and fine, and firms may have their licence to trade terminated. Regulators are keen to be able to pinpoint individuals responsible for any wrongdoing within a firm, especially by an officer who has an important control function within the firm.

As noted above, it is an offence to fail to disclose a suspicion of money laundering. This requires the staff at financial services firms to be aware of what constitutes a suspicion, and this is why there is a requirement that staff must be trained to recognise and deal with what may be money laundering transactions.

2.1.3 Stages of Money Laundering

Learning Objective

2.2.3 Know the stages of money laundering

There are three stages to a money laundering operation:

- placement
- layering, and
- integration.

Placement

Placement is the first stage and typically involves depositing the criminally obtained cash into some form of bank account.

This stage requires the money launderer to introduce cash into the financial system. This requires cash in hand to be replaced by some valuable claim on assets or benefits. In recent years, the use of electronic currency (eg, Bitcoin) has raised much interest regarding the disruptive impacts of technology but should also be considered in the light of money laundering considerations. Any transaction by which someone converts actual currency for an electronic currency could be an example of placement.

Layering

Layering is the second stage and involves moving money around in order to make it difficult for the authorities to link the placed funds with the ultimate beneficiary of the money. Disguising the original source of the funds might involve buying and selling foreign currencies, shares or bonds.

For most financial services firms, layering represents the biggest risk as any transaction that exchanges one asset for another, or changes the registered owners of an asset, could be a step of layering. As the purpose of layering is to disguise the original source of the money and the eventual end recipient, layering processes will often be protracted and detailed, yet each individual step will be designed to appear innocent, such as the usual activity of an investor managing their affairs.

Integration

Integration is the third and final stage. At this stage, the layering has been successful and the ultimate beneficiary appears to be holding legitimate funds (clean money, rather than dirty money).

Integration can be more difficult to demonstrate than the other two stages, because the cleaned money may not actually be removed from the financial system. In some cases, the integration phase may see the criminal making withdrawals from a bank account, while in others, the money may remain invested in some long-term project or investment. The money launderer's purposes are satisfied providing the illegal source of the money can no longer be identified by firms or law enforcement.

Broadly, the AML provisions are aimed at identifying customers and reporting suspicions at the placement and layering stages, and keeping adequate records that should prevent the integration stage being reached.

2.1.4 Client Identification Procedures

Learning Objective

2.2.4 Know the client identity procedures

Money laundering regulations require firms to adopt identification procedures for new clients and keep records in relation to this proof of identity. This obligation to prove identity is triggered as soon as reasonably practicable after contact is made and the parties resolve to form a business relationship. Failure to prove the identity of your client could result in an unlimited fine and a jail term. Along with 'know your client' (KYC) rules, it is just as important to know where the source(s) of money for investment has come from and the source of wealth, to make sure that the money has not come from any illegal activities.

The identification procedures that a firm must carry out are usually referred to as customer due diligence (CDD) and the procedures that must be carried out involve:

- identifying the customer and verifying their identity
- identifying the beneficial owner, where relevant, and verifying their identity, and
- obtaining information of the purpose and intended nature of the business relationship.

It is also a requirement that financial institutions undertake checks to determine the source of funds that the client wishes to invest. They must also check international sanction blacklists to ensure that the client is not one with whom doing business is prohibited. Firms must also conduct ongoing monitoring of the business relationship with their customers to identify any unusual activity.

The types of documentary evidence that are acceptable to prove the identity of a new client would include the following:

- **For an individual** – an official document with a photograph will prove the name (eg, passport or international driving licence). A utilities bill (gas, water or electricity) with name and address will prove the address supplied is valid. Some forms of ID may not be accepted (eg, mobile phone bills); and only originals are valid, not copies.
- **For a corporate client (a company)** – proof of identity and existence would be drawn from the constitutional documents (Articles and **Memorandum of Association**) and sets of accounts. For smaller companies, proof of the identity of the key individual stakeholders (directors and shareholders) would also be required.

Checks should be made about whether the client is (or is a close relative of) a politically exposed person (PEP). Note that 'PEP' is a term used by regulators to identify persons who perform important public functions for a state. These are individuals who require heightened scrutiny because they hold or have held positions of public trust, such as government officials, senior executives of government corporations, politicians, important political party officials and so on, along with their families and close associates.

In cases of higher risk – such as when a PEP is involved, the customer is not physically present when identity is verified, they are based in a high-risk country, or the transaction is complex or unusually large. Enhanced due diligence (EDD) measures must be applied on a risk-sensitive basis.

On the other hand, for some particular customers, products or transactions, simplified due diligence (SDD) may be applied – for example, when the client is a bank, publicly listed company or a public body. Firms must have reasonable grounds for believing that the customer, product or transaction falls within one of the allowed categories, and be able to demonstrate this to their supervisory authority.

2.2 Insider Dealing

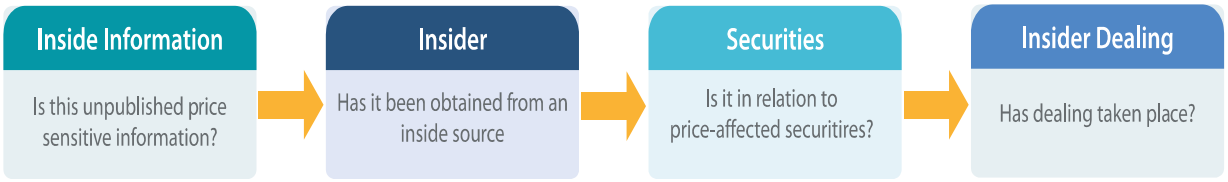
Learning Objective

2.2.6 Know the activities generally considered to constitute insider dealing

When directors or employees of a listed company buy or sell shares in that company, and have Information that is not known to the general public, there is a possibility that they are committing a criminal act – **insider dealing**. For example, a director may be buying shares in the knowledge that the company's last six months of trade was better than the market expected. The director has the benefit of this information because they are 'inside' the company. In nearly all markets, this would be a criminal offence, punishable by a fine and/or a jail term.

Rules on insider dealing (or insider trading) may vary slightly among countries and markets. There is too much detail to cover here, so candidates are advised to refer to the relevant sources, if they wish to obtain more information on the specific regulations and penalties that apply in their own jurisdiction. Key elements of the offence in the UK are summarised below.

To be found guilty of insider dealing, it is necessary to define who is deemed to be an insider, what is deemed to be inside information and the situations that give rise to the offence. This is shown diagrammatically below:



Price-Sensitive Information

Inside information is information that relates to particular securities or a particular issuer of securities (and not to securities or securities issuers generally), and which:

- is specific or precise
- has not been made public, and
- if it were made public, would be likely to have a significant effect on the price of the securities.

This is generally referred to as 'unpublished price-sensitive information'.

The information becomes public when it is published, eg, a UK-listed company publishing price-sensitive news through the **London Stock Exchange's (LSE's)** Regulatory News Service. Information can be treated as public even though it may only be acquired by persons exercising diligence or expertise (for example, by careful analysis of published accounts, or by scouring a library).

Price-Affected Securities

The securities covered by the insider dealing rules are normally described as 'securities'. These include:

- shares
- bonds (issued by a company or a public sector body)
- **warrants**
- depositary receipts
- options (to acquire or dispose of securities)
- futures (to acquire or dispose of securities), and
- **contracts** for difference (based on securities, interest rates or share indices).

Note that the definition of securities does not normally embrace commodities and derivatives on commodities (such as options and futures on agricultural products, metals or energy products), or units/shares in mutual funds.

Inside Source

A person has this price-sensitive information as an insider if they know that it is inside information from an inside source. The person may have:

1. gained the information through being a director, employee or shareholder of an issuer of securities
2. gained access to the information by virtue of their employment, office or profession (for example, the auditors to the company), or
3. sourced the information from (1) or (2), either directly or indirectly.

2.3 Market Abuse

Learning Objective

2.2.5 Know what constitutes market abuse

The efficient operation and integrity of the capital markets depends on effective legislation and regulation controlling insider dealing and market manipulation.

We have already seen that insider dealing is when someone with valuable and privileged information takes advantage of that knowledge to gain personal benefit at the expense of other investors. Market manipulation takes this further, by recognising that certain behaviours potentially distort the market and allow certain participants to unethically benefit at the expense of other investors.

Regulators group behaviour that would distort markets and insider dealing under the heading of market abuse. Both threaten the interests of shareholders and other investors, but are also an impediment to the efficient functioning of the capital markets.

Examples of market abuse are shown in the table below.

Insider dealing	When an insider deals, or tries to deal, on the basis of inside information. (Improper disclosure and misuse of information are types of insider dealing.)
Improper disclosure	When an insider improperly discloses inside information to another person.
Misuse of information	Behaviour based on information that is not generally available but which would affect an investor's decision about the terms on which to deal.
Manipulating transactions	Trading, or placing orders to trade, that gives a false or misleading impression of the supply of, or demand for, one or more investments, thus, raising or depressing the price of the investment to an abnormal or artificial level.
Manipulating devices	Trading, or placing orders to trade, which employs fictitious devices or any other form of deception or contrivance.

Dissemination	Giving out information that conveys a false or misleading impression about an investment or the issuer of an investment when the person doing this knows the information to be false or misleading.
Distortion and misleading behaviour	Behaviour that gives a false or misleading impression of either the supply of, or demand for, an investment, or behaviour that otherwise distorts the market in an investment.

How unacceptable behaviour is treated will vary depending on the seriousness of the event and the laws in each country. In general terms, market abuse is treated as a civil offence, and insider dealing can be treated as a civil or criminal offence depending upon the severity of the offence.

Globally, insider dealing and market manipulation are widely recognised as being unacceptable. Indeed, IOSCO expressly recognises market abuse and insider dealing to be a threat to the integrity and good governance of financial markets that can, in certain circumstances, undermine systemic stability in those markets. While efforts continue to combat insider dealing and market manipulation, these practices continue to evolve such that they adapt to new technologies and communication forms; hence, ongoing vigilance and updated regulatory measures are necessary to address emerging threats.

3. Ethical Standards

Learning Objective

2.1.1 Know the objectives and benefits of regulation; the main differences between rules-based and principles-based approaches to financial regulation; the role of the main international regulatory organisations; how regulations are implemented at a national level; and the importance of ethical standards

Ethical codes of conduct are used in many business areas and they are often the framework on which professions are built. Abiding by a code of conduct is often what defines a 'professional' by providing a framework for carrying out their fiduciary duties.

Codes of ethics set out fundamental principles and values that provide a vision of high professional standards. They are designed for those who want to do the right things for the right reasons, and set out a series of behaviours and standards that provide a benchmark for acting ethically and to the highest professional standards.

Following the global financial crisis of 2007–08 and past mis-selling scandals, trust in the financial sector has been diminished. By installing and following ethical standards, this can in some way help rebuild trust in the sector and in professionals giving advice to clients.

3.1 The Chartered Institute for Securities & Investment (CISI) Code of Conduct

For any industry in which trust is a central feature, demonstrable standards of practice, and the means to enforce them, are a key requirement. A sound client-adviser relationship requires trust. Clients are generally somewhere between suspicious and cynical of financial advisers, which is understandable given the range of mis-selling scandals there have been in recent decades. Examples include: commission bias in the UK, which led to a radical overhaul of the retail investment market; the ongoing debate in the US over fiduciary standards; and misconduct and selling scandals in Australia such as the revelations from the Royal Commission into Misconduct in the Bank, Superannuation, and Financial Services Industry. Clients are rightly demanding and expect high standards which means that wealth managers need to concentrate at getting better at providing the right advice and building strong, lasting relationships that can survive the inevitable hiccups that may occur.

The CISI has in place its own code of conduct. Membership of the CISI requires members to meet the standards set out within the Institute's principles. Further, as part of their Continuing Professional Development (CPD) requirements, members must fulfil specific ethics education components. According to the CISI, ethics and integrity is at the foundation of the standards expected of its members.

Few of us deliberately set out to act unethically, and many firms and individuals maintain the highest ethical standards, without feeling the need for a plethora of formal policies and procedures documenting conformity with accepted ethical standards. Nevertheless, it is apparent that it cannot be assumed that ethical awareness will be absorbed through osmosis. Accordingly, if we are to achieve the highest standards of ethical behaviour in our industry, and wider industry in general, it is sensible to consider how we can create a sense of ethical awareness.

If we accept that ethics is about 'doing the right thing', then we can seek first of all to instil the type of thinking which causes us to reflect upon what we are considering doing, or what we may be asked to do, before we carry it out. There may be situations, particularly at work, where we are faced with a decision when it is not immediately obvious whether what we are being asked to do is actually right. A simple checklist will help to decide; is it honest, open, transparent and fair?

- **Honest** – have I been truthful about my action or decision with everyone involved, and told no lies or half-truths?
- **Open** – is everyone affected by my action or decision aware of the consequences?
- **Transparent** – have I been clear and not misleading to any party in reaching my decision?
- **Fair** – have I made sure that my action or decision will not result in any party being unknowingly disadvantaged or unduly advantaged?

A simple and often quoted test is whether you would be happy to have your name appear in the media in connection with the transaction or decision, or would you be happy if your friends and family knew about your actions.

For any industry in which trust is a central feature, the need to have demonstrable standards of practice and the means to enforce them is a key requirement. Financial services are one such industry, and the CISI already has in place its own Code of Conduct. Membership of the CISI requires members to meet the standards set out within the Institute's Principles.

CISI Principles

Professionals within financial services owe important duties to all their stakeholders including clients, market participants, their profession, professional bodies, regulators, colleagues as well as to wider society. Where these duties are set out in law or regulation, members of the CISI should comply with the requirements in both letter and spirit.

Members of CISI are also required to meet the standards set out within the CISI's Principles, which impose an obligation on members to act at all times not only in compliance with the rules, but also to support the underlying purpose and values of the Institute.

The CISI Code of Conduct is stakeholder-based and each of the eight principles specifies the duties owed by members to one or more stakeholders who may be impacted by their actions. The eight principles and corresponding stakeholders are outlined below:

CISI Code of Conduct			
The Principles			Stakeholder
1.	Personal Accountability	To strive to uphold the highest levels of personal and professional standards at all times, acting with integrity, honesty, due skill, care and diligence to avoid any acts, either in person, in a remote working environment or digitally which may damage the reputation of your organisation, your professional body or the financial services profession.	Self, clients, regulators, colleagues, market participants, firms, profession, society
2.	Client Focus	To put the interests of clients and customers first by treating them fairly, being a good steward of their interests, never seeking personal advantage from confidential information received and utilising client data only for a defined purpose.	Clients
3.	Conflict of Interest	Being alert to and actively manage fairly and effectively any personal or other conflicts of interest, obeying legislation and complying with regulations to the best of your ability, ensuring you are open and cooperative with all your regulators, challenging and reporting unlawful or unethical behaviour.	Clients, market participants, regulators
4.	Respect for Market Participants	To treat all counterparties and business partners with respect, to observe proper standards of market integrity, good practice, conduct and confidentiality required to maintain the highest level of mutual trust.	Clients, market participants
5.	Professional Development	To strive continually for professional excellence, committing to continuous professional development (CPD) and promoting and supporting the development of others.	Profession, clients, colleagues

6.	Aware of Capabilities	To decline to act on any matter about which you are not competent or qualified unless you have access to such advice or assistance to carry out the work in a professional manner, taking into account the nature of the individual mandates given by your customers and counterparties.	Clients, profession, market participants
7.	Respect Others and the Environment	To treat everyone fairly and with respect, supporting opportunity for all, embracing diversity and inclusion and ensuring that the environmental impact of your work is considered.	Society, colleagues, clients, regulators, market participants, profession, professional body
8.	Speak Up and Listen Up	To be active in speaking up and encouraging others to do so by listening up, promoting a safe environment for all and recognising the responsibilities you have to the communities in which you operate.	Society, colleagues

There may be situations where professionals are faced with making a decision where the correct course of action is not immediately obvious. In addition to referring to the Code, consideration of the following could help to decide the right course of action.

Clear and Honest	Have I told no lies or half-truths to any party involved in my reaching my decision?
Impartial and Open	Is everyone affected by my action or decision aware of the consequences?
Straightforward and Transparent	Have I made sure that my action or decision will not result in any party being unknowingly disadvantaged or unduly advantaged?
Informed and Fair	Have I considered the interests of my potential stakeholders and not been misleading when making my decision?

End of Chapter Questions

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

1. **What is the difference between rules-based and principles-based regulation?**
   Answer reference: Section 1.2

2. **How are IOSCO's principles of securities regulation applied?**
   Answer reference: Section 1.3.3

3. **What role does the Financial Action Task Force (FATF) undertake?**
   Answer reference: Section 2.1.1

4. **What are the five main offences relating to money laundering?**
   Answer reference: Section 2.1.2

5. **What are the three stages of money laundering?**
   Answer reference: Section 2.1.3

6. **What documentary evidence should be sought to validate the identity of a corporate client?**
   Answer reference: Section 2.1.4

7. **What type of client might require enhanced due diligence (EDD)?**
   Answer reference: Section 2.1.4

8. **How is inside information usually defined?**
   Answer reference: Section 2.2

9. **What is market abuse?**
   Answer reference: Section 2.3

10. **Giving out information that conveys a false or misleading impression is an example of which type of market abuse?**
    Answer reference: Section 2.3

Chapter Three

Asset Classes and Financial Markets

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This syllabus area will provide approximately 14 of the 100 examination questions

1. Cash Deposits and Money Markets

Learning Objective

3.1.1 Know the key features of cash and near-cash assets: interest rates (including negative interest rates); cash deposits; money market instruments; money market funds

Nearly all investors keep at least part of their wealth in the form of cash, which will be deposited with a bank or other savings institution to earn interest. Cash investments take two main forms:

- cash deposits, and
- money market investments.

1.1 Cash Deposits

The term 'cash deposits' is used to refer to the deposits that are made with banks and other financial institutions; in other words, the current and savings accounts used every day by retail and commercial customers.

The financial institutions that accept cash deposits are referred to as 'deposit takers' to reflect that there are now a wide range of financial institutions that compete with the products that were traditionally offered by banks. A deposit-taking institution is one that is licensed by a country's regulator to accept deposits and includes banks, savings institutions and securities firms.

1.1.1 Types of Account

Financial institutions offer a wide range of account types in which savers and investors can hold their cash. The main types of accounts that are encountered are:

Types of accounts	
Current or checking accounts	• These accounts are typically used for everyday banking needs such as receiving payments, undertaking transactions, and allowing the **holder** to get at their money as and when needed. • Most accounts offer a comprehensive range of services, including access to online banking and debit cards. • Interest rates for current accounts are often low or even nil, but these accounts provide customers with the benefit of easy access to available funds.
Savings accounts	• These accounts are typically used for surplus funds to earn a better rate of interest and may represent both short-term and long-term investments. • The rate of interest offered will typically vary depending on the amount deposited and the period of notice that needs to be given before withdrawal is permitted.

The range of savings accounts available in any country will depend on competition. The description and features of these accounts can also vary from one country to another. To simplify, we can categorise savings accounts based on their ease of access, which can be broken down into three main types:

Classification of savings accounts	
Instant access accounts	• These accounts allow the holders to get at their money when they want but may limit the number of times it can be used within a given period. • The rate of interest paid is often at a variable rate and usually lower than Notice and Fixed-term accounts.
Notice accounts	• These require that the holder gives a certain period of notice before withdrawing all or part of the deposit. • Typical notice periods are 30, 60 and 90 days. • For example, a 90-day notice account would require that the depositor give 90 days' advance warning before they could have their money back. • Where the deposit taker allows this notice to be waived, it may apply a penalty to compensate itself. • They generally earn interest at variable rates which are linked to base rate.
Fixed-term accounts	• These accounts earn a set rate of interest over their term. • The deposits are tied up for a set term, which can range from months to years.

Opening an account is a relatively straightforward process and will typically require the investor to provide proof of identity so that anti-money laundering (AML) obligations can be met.

1.1.2 Money Market Accounts

Money market accounts are offered by banks as an alternative to a standard retail bank account. For the retail investor, these accounts can sometimes offer higher returns than can be achieved on standard deposits. The disadvantage is that the higher returns can usually only be achieved with relatively large deposits and, even then, the rate of return can be low.

Placing funds in a money market account means that the investor is exposed to the risk of that bank. By contrast, a money market fund will invest in a range of fixed-income instruments from many providers, which means there is **diversification** and less reliance on one counterparty/institution.

1.1.3 Overseas Accounts and Foreign Currency Deposits

An investor might **open** an account in another country to facilitate property payments, or because they visit regularly. The rules for opening accounts for non-residents may require additional information and documentation to be provided such as a national identity number and a declaration of fiscal residence. This is typically because countries will share information on the interest earned by non-residents with the tax authorities of other states to prevent tax avoidance.

Where cash is deposited overseas, depositors should also consider the following:

- The costs of currency conversion and the potential exchange rate risks if deposits cannot be accepted in the investor's home currency.
- The creditworthiness of the banking system and of the chosen deposit-taking institution and whether a depositors' protection or compensation scheme exists.
- The tax treatment of interest applied to the deposit in the home country of the account and the country in which the investor is resident for income tax purposes.
- Whether the deposit will be subject to any exchange controls that may restrict access to the money and its ultimate repatriation.

Deposits can also be held with many deposit takers in a range of currencies, either to take advantage of higher rates or to speculate on currency movements.

An investor may choose to hold cash in foreign currency because the interest rates earned on that currency are higher. There is the risk, however, that the currency depreciates, and that the additional income earned is more than outweighed by a loss in capital value when the deposit is converted back. Alternatively, an investor may hold the foreign currency for speculative reasons in the belief that the currency is due to appreciate in value and that a capital gain can be made. This runs the risk that the currency instead depreciates, generating a loss.

Banks offering foreign currency deposits may apply higher charges because of the greater administrative costs involved and these may offset some of the additional returns that might otherwise be earned.

1.1.4 Islamic Savings Accounts

Islamic savings accounts differ from the types of accounts mentioned above and have been designed to meet the needs of Muslims who need accounts that are Shariah compliant.

Shariah law (as set down in the Qur'an and Sunnah) forbids the earning or paying of interest; therefore, the traditional deposit and lending methods that are based on interest payments are unacceptable.

Shariah law goes beyond forbidding interest and requires an element of shared risk. Money invested in an Islamic savings account is invested in ethical activities (not lent out) and earns a profit rate (rather than interest). Islamic accounts, therefore, differ in that interest is not paid, but also that there is no certainty that the investor will get their money back in full. They, therefore, carry investment risk.

Note that these accounts are often not restricted to muslims.

1.1.5 Returns

While the interest earned on a cash deposit clearly represents the return, care needs to be taken when comparing the returns from competing accounts. It is important to ensure that the rates that are being compared are calculated on the same basis and take account of any charges, the impact of taxation and the impact of any extension rates.

Returns on competing accounts require close inspection as:

- Advertised rates do not always represent the true rate actually earned.
- Tax treatment may vary, and the rates may be quoted net or gross of tax.
- There may be minimum or maximum investment amounts, which may restrict the usefulness of an account.
- Attractive accounts may only be available for money that is new to that savings institution and not from existing accounts with the same institution.
- There may be penalty charges if withdrawals are made or early encashment is needed, which will reduce returns; depending on the account terms, penalties may only impact the amount withdrawn, or the entire amount of the deposit.
- High-quoted returns may only last for a limited period, to be replaced by lower rates.

The interest rate on an account is often referred to as the nominal rate and the annualised rate allowing for the frequency with which interest is paid is referred to as the **annual equivalent rate (AER)** or **effective rate**.

Calculating an Annual Equivalent Rate
The effective annual rate can be calculated using the formula shown below: Annual Equivalent Rate = $(1+ r)^n$ where: r = the nominal rate of interest n = the number of periods in which interest will be paid

Calculating an Annual Equivalent Rate
For example, if a bank offers an instant access account with an advertised rate of 3% which is credited quarterly, the AER for the account can be calculated using this formula as follows: AER = $(1 + 0.03 / 4)^4 - 1 = (1 + 0.0075)^4 - 1 = 1.030339 - 1 = 0.030339$ or 3.0339%

The key learning point to remember is that given identical nominal interest rates, the more frequently interest is compounded, then the more advantageous it is to the investor. This is because interest is being calculated on previously earned interest (called compounding), thereby increasing the total amount of interest earned over time.

1.1.6 Risks

Although cash investments are relatively simple products, it does not follow that they are free of risks, mainly relating to the risk of insolvency of the deposit-taking institution. This can be clearly observed by bank collapses, such as those during the global financial crisis.

Some of the risks presented by cash-based investments include:

- Deposit-taking institutions are of varying creditworthiness and any default risk must be assessed.
- Interest rates change, and so the returns from cash deposits will vary.
- The interest earned will often be below the rate of inflation, in which case the real return would be negative.
- Currency fluctuations and different regulatory regimes where funds are invested offshore present further risks.

As a result, when comparing available investment options, it is important to consider the risks that exist as well as comparing the interest rates available.

The extent of any compensation payable under bank deposit protection schemes should also be considered. Deposit insurance (as it is also known) is a measure implemented in many countries to protect bank depositors, in full or in part, from losses caused by a bank's inability to pay its debts when due.

The purpose of deposit insurance varies, but typically involves promoting financial stability and protecting small savers from loss in the case of a troubled or failing bank. For example:

- The Federal Deposit Insurance Corporation (FDIC) in the US provides insurance cover for all deposit accounts, money market deposit accounts and **certificates of deposit (CDs)**. The standard insurance amount is $250,000 per depositor, per insured bank, for each account ownership category.
- Across the European Union (EU), an EU Directive requires member states to have deposit guarantee schemes for the first 100% of deposits up to €100,000 per person per institution.
- A similar scheme exists in the UK, with the Financial Services Compensation Scheme (FSCS) providing protection for deposits up to £85,000 per person per authorised institution.

There are similar schemes in other countries, both developed and developing, each with various restrictions and limitations. Individuals must therefore, be aware of these details, to understand the extent of protection that their deposits have in different jurisdictions.

The explicit rules of a deposit insurance system may provide for insurance for all customers of a bank or only for retail customers and small businesses.

It is important to also bear in mind that in the event of default of a deposit-taking institution, it will take time to resolve the position and return deposits to investors. The timescale needed to be able to sort matters out will depend upon the complexity involved and could take from one to six months to complete.

Although bank deposit protection schemes give some degree of protection, its availability should not distract investors from assessing credit risk extremely carefully – higher than normal returns may mean higher than normal risk.

1.2 Money Market Instruments

The money markets serve wholesale or institutional participants and typically distinguish between the capital market and the money market. The latter usually involves borrowing and lending for periods of a year or less.

The money markets are characterised by the issue, trading and **redemption** of short-dated **negotiable securities**, usually with a **maturity** of up to one year, though typically three months.

Direct investment in money market instruments often requires a relatively high minimum subscription, making it more suitable for institutional investors. Money market instruments are, however, accessible to retail investors indirectly through money market funds.

1.2.1 Types of Money Market Instruments

The main types of money market instruments are considered below.

Cash instruments (eg, deposits and repos)	• Money market deposits are fixed-term deposits of up to one year with banks and securities houses, and are also known as time deposits. They are not negotiable and so cannot be liquidated before maturity. • A **repo** is a sale and repurchase agreement, and is similar to a secured loan. Typically, a repo allows a securities holder to raise cash using the securities as collateral, while the cash lender receives high-quality collateral against the loan. This puts vital liquidity into the markets.
Treasury Bills (T-Bills)	• **Treasury bills (T-bills)** are issued by governments at a discount to par and are redeemed at their **nominal value** (also called par or face value). For example, a T-bill issued by the US government may be issued at $99.50 and repaid at par; that is, $100. • Most governments issuing T-bills issue them for three-, six- and 12-month periods. T-bills are highly liquid and act as the benchmark risk-free (actually, minimal-risk) interest rate when assessing the returns potentially available on other asset types. • T-bills are used as a monetary policy instrument to absorb excess liquidity in the money markets so as to maintain short-term money market rates, or the price of money, as close as possible to base rate.

Certificates of Deposit (CDs)	• CDs are negotiable **bearer securities** (ie, the person who holds, or is the 'bearer' of, the share certificate is the owner) issued by commercial banks in exchange for fixed-term deposits. They have a fixed term (up to five years) and a fixed rate of interest, set marginally above that for an equivalent bank time deposit. The holder can either retain the CD until maturity or realise the security in the money market whenever access to the money is required. • They are also an important means by which banks can borrow, or lend reserves between themselves. • As they are a **fixed-interest security**, the price will fluctuate with the competitiveness of the interest rate compared to the prevailing yields, thus exposing holders to potential capital gains or losses if they sell before the stated maturity date. • In the US and some other markets, the term 'certificates of deposit' is also used for fixed-term or notice savings accounts, which are often specifically called negotiable certificates of deposit (NCDs) or jumbo CDs.
Commercial Paper (CP)	• **Commercial papers (CPs)** are unsecured negotiable bearer securities, or short-term promissory notes, which are issued by companies with a full stock market listing. Hence, they are the corporate equivalent of T-bills. • These securities are issued at a discount to par and have maturities of up to 270 days (although typically 30 days or less). They are redeemed at par, so the return on CPs comprises entirely capital gain – this reflects any difference between the purchase price and the nominal value at redemption, as well as any interest earned over the holding period.
Bills of Exchange	• A bill of exchange is another short-term financing instrument that can be issued by companies. • It is essentially an invoice, for goods or services supplied, which states the amount and date by which this amount is due to be paid by the recipient of the transaction. Once the obligation to pay this amount by the due date is formally accepted by the party in receipt of these goods and services, the instrument becomes a negotiable bearer bill and can be traded at a discount to its face value until maturity. • To minimise the credit risk associated with holding such a bill, and to narrow the discount at which it can be sold, the issuer may obtain the formal acceptance of an eligible bank to guarantee the face value of the bill at maturity.

1.2.2 Returns

The return on a money market instrument is either in the form of income or capital gain. As a result, there are two main classes of money market instrument:

- instruments quoted on a **yield** basis, and
- instruments quoted on a discount basis.

Types of Money Market Instruments	
Instruments quoted on a yield basis	• These are interest-bearing instruments. • They are issued at their full-face value and the investor's return is the yield or interest. • Types include money market deposits, loans, CDs and some CP.
Instruments quoted on a discount basis	• These are discount instruments or **zero coupon bonds (ZCBs).** • They are Issued at a discount to their face value and repaid at face value at maturity. • The investor's return is the difference between the discounted purchase price and the face value of the security. • Types include T-bills and most CP.

The date on which the instrument starts to accrue a return is called the value date (ie, the beginning of the term to maturity). If the instrument is negotiable, the lender can sell it on in the secondary market and the principal will be paid to whoever holds the instrument at maturity.

1.2.3 Risks

Money market instruments have a lifespan of one year or less. They can be sold at very short notice, usually within a day. Their basic characteristics and the size of the participants in the market make for high levels of liquidity.

The dollar, euro and sterling money markets are particularly deep and liquid. The issuers all have high creditworthiness, meaning that the instruments can be extremely high-quality assets. The investors are mainly banks, shuffling reserves around the world and speculating on the direction of interest and exchange rates; therefore, trading levels are high.

The short maturity date of money market instruments and the high issuer quality means that money market instruments carry low investment risk and, as a result, they usually offer very low returns. The returns will differ based on the level of creditworthiness of the issuer, with T-bills at the bottom of the risk/reward curve and one-year CP at the top.

1.3 Money Market Funds

Money market instruments are primarily used by the Treasury operations of central banks, international banks and multinational companies and are traded in a highly sophisticated market. This does not mean, however, that they have no role to play in the investment management of a client's portfolio. They can have a very useful and significant role to play, but need to be accessed through specialist investment funds.

A money market fund contains short-term instruments that should have relatively lower **volatility**. To assess whether a money market fund is suitable for inclusion in a portfolio, the adviser needs to consider a number of issues, including:

- The relative rate of return compared to a money market account or other cash deposit.
- The charges, tax rates (**capital gains tax (CGT)** or income tax) that will be incurred and their effect on returns.
- Speed of access to the funds on withdrawal.
- The underlying assets that comprise the money market fund (and, in turn, the associated risks, and if a retail client should be invested in any of those assets).
- How the creditworthiness of the underlying assets is assessed.
- The rate of return compared to other money market funds and how that is being generated.
- The experience of the fund management team.
- Money market instruments may only be redeemable at the precise date at which the fixed term ends. If the fund requires unexpected levels of liquidity, it may not be possible to liquidate these instruments.
- Money market funds are not usually covered by any deposit protection scheme as is the case with money market accounts and normal bank accounts.

Investors need to be aware of the underlying investments held in these money market funds as they are not always invested in investment-grade (ie, high quality) underlying investments. A higher **yield** on some funds compared to prevailing market rates is a clear indication of what might be in the money market fund. In addition, compared to holding cash, these funds (when sold) could also incur either a capital gain for tax purposes or, if offshore, that gain could be subject to income tax.

Money market funds can fulfil a number of roles within a client's portfolio, including:

- short-term home for cash balances
- as an alternative to bonds and equities in a multi-asset class portfolio to lower the overall volatility of the portfolio, and
- as part of the **asset allocation** strategy, to get higher returns than they would receive in cash.

Money market funds also offer a potentially safe haven in times of stock market falls. When stock markets have had a long bull period and economic prospects begin to worsen, an investor may want to take profits at the peak of the stock market cycle and invest the proceeds in the money markets until better investment opportunities arise. The same rationale can be used where the investor does not want to commit new cash at the top of the stock market cycle. The nature of money market instruments means that they offer an alternative investment that does not give exposure to any appreciable market risk.

Within a normal asset allocation, a proportion of funds will be held as cash. Money market funds can therefore be the vehicle for holding such asset allocations, depending on how the rates on offer compare to other accounts that offer easy access.

To summarise, money market funds have a role to play in an investment portfolio, but they still carry some risks. The short-term nature of the money market instruments provides some protection in a downturn, but short-term interest rates fluctuate frequently, so they can still be exposed; and investors would not be protected by a deposit protection scheme.

2. The Foreign Exchange (FX) Market

Learning Objective

3.2.1 Know the basic structure of the foreign exchange market including: currency quotes; settlement

3.2.2 Be able to calculate a forward exchange rate using interest rate parity formula

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The increasing globalisation of financial markets has seen explosive growth in the movement of international capital, so much so that over $6 trillion a day flows through world foreign exchange centres, with over a third of this turnover passing through London alone. The world's most heavily-traded currency remains the US dollar as the world's premier reserve, or safe haven, currency.

The FX market does not have a centralised marketplace; instead, it comprises an international network of major banks and currency dealers, each making a market in a range of currencies in a truly internationalised market. Trading in currencies is 24-hour, as it could take place in the various time zones of Asia, Europe and America. London has grown to become the world's largest FX market, with other large centres including the US (New York), Japan (Tokyo) and Singapore.

24-Hour FX Market

The FX market is open 24 hours a day, although it is not always active the entire day and formally closes for the weekend. The FX market can be broken up into four major trading sessions – the Sydney session, the Tokyo session, the London session and the New York session. The table below shows the opening and closing times for each session. (Note that these will change during the year for those countries that operate daylight saving time during their winters.)

Session		Local Time	GMT
Sydney	Open	7:00	20:00
	Close	16:00	5:00
Tokyo	Open	9:00	24:00
	Close	18:00	9:00
London	Open	8:00	8:00
	Close	16:00	16:00
New York	Open	8:00	13:00
	Close	17:00	22:00

In between each trading session, there is a period of time where two sessions are open at the same time. This results in a greater volume of trading, so those periods are often the busiest time during the trading day.

Trading of foreign currencies is always done in pairs. These are currency pairs where one currency is bought and the other is sold, and the prices at which these take place make up the exchange rate. When the exchange rate is being quoted, the name of the currency is abbreviated to a three-letter reference – for example, UK pounds (sterling) is abbreviated to GBP. The most commonly quoted pairs are:

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

When currencies are quoted, the first currency is the **base currency** and the second is the counter or quote currency. The base currency is always equal to one unit of that currency, in other words, one pound, one dollar or one euro. For example, if the EUR/USD exchange rate is 1/1.1650 this means that €1 is worth $1.1650. In a currency pair, certain currencies are always the base rate – for example, EUR, GBP, the Australian dollar (AUD), and the New Zealand dollar (NZD) are typically quoted as the base currency in most pairs. Further, if the currency pair does not include the US dollar, then it is known as a cross-currency pair (eg, EUR/JPY).

When currency pairs are quoted, a **market maker** or foreign exchange trader will quote a bid and ask price. Continuing with the example of the EUR/USD, the quote might be 1.1640/60 – notice that the euro is not mentioned, as standard convention is that the base currency is always one unit. Therefore, if you want to buy €100,000 then you will need to pay the higher of the two prices and deliver $116,600 (ie, €100,000 x 1.1660); if you want to sell €100,000 then you get the lower of the two prices and receive $116,400 (ie, €100,000 x 1.1640).

The FX market is renowned for being an over-the-counter (OTC) market – ie, one where brokers and dealers negotiate directly with one another. The main participants are large international banks, which continually provide the market with prices. Central banks are also major participants in foreign exchange markets, which they use to try to control the money supply, inflation and interest rates.

Each bank advertises its latest prices, or rates of exchange, through commercial quote vendors and conducts deals through FX trading platforms. Deals struck in the spot market are for delivery and settlement two business days after the date of the transaction; that is, on a **T+2** basis.

Settlement is made through the worldwide international banking system. Banks hold accounts with each other and their overseas branches and subsidiaries, through which a settlement is made.

There are two types of transaction conducted on the FX market:

- **Spot transactions** – are immediate currency deals that are settled two working days later (ie, T+2).
- **Forward transactions** – involve currency deals that are agreed for a future date at a rate of exchange fixed now.

A forward exchange contract is an agreement between two parties to either buy or sell foreign currency at a fixed exchange rate for settlement at a future date. The **forward exchange rate** is the exchange rate set today even though the transaction will not settle until some agreed point in the future, such as in 90 days' time.

The relationship between the spot exchange rate and the forward exchange rate for two currencies is determined by the difference in their respective nominal interest rates over the specified term. This relationship is mathematical and independent of market expectations.

In simple terms, the logic behind the theory of interest rate parity is that the forward exchange rate should make investors indifferent to interest rates available on bank deposits in the countries involved. This can be seen in the following example:

Example – Calculating a Forward Rate

If we want to calculate a three-month **forward rate** for GBP/USD, then we need the current **spot rate** and the three-month interest rates in the UK and the US:

The GBP/USD spot rate is 1.25.

Three-month interest rates in the UK are 0.50% and in the US are 1%. As those interest rates are quoted on an annual basis, we need to adjust them to quarterly.

UK three-month rates are 0.50% ÷ 4 = 0.125%.

US three-month rates are 1.00% ÷ 4 = 0.25%.

We can then calculate the forward rate using the interest rate parity formula:

$$\text{Forward rate} = \text{Spot rate} \times \frac{1 + \text{Quote currency short-term rate}}{1 + \text{Base currency short-term rate}}$$

As interest rates in this example are higher than in the UK, then the forward rate is higher. If it had been lower, then the forward rate would have been lower.

Applying the formula, we can calculate the three-month forward rate as:

$$\text{Forward rate} = 1.25 \times \left[\frac{1 + 0.0025}{1 + 0.00125} \right] = 1.2516$$

If an investor were to buy $125,000, then they would need to deliver £100,000.

As mentioned above, the forward rate at the end of three months should result in a position where they are indifferent to the interest rate differential.

So, if the investor retained £100,000 and invested it for three months at 0.125%, they would have £100,125 at the end of the period. If they have $125,000 and invest for three months at 0.25%, then they would have $125,312.50 at the end of the period.

	Today	Interest rate	Interest for the period	Value at end of the period
GBP	£100,000.00	0.125%	£125.00	£100,125.00
USD	$125,000.00	0.25%	$312.50	$125,312.50

- The forward rate, therefore, needs to make $125,312.50 equate to £100,125, so 125,312.50 / 100,125 = 1.2516.

In day-to-day business, an outright forward rate is quoted as forward points that are either added to, or deducted from, the spot rate to arrive at the forward rate; **premiums** are added to the spot rate and discounts are deducted from the spot rate to arrive at the forward rate. There are two ways to find out whether the forward points are at a premium or **discount** – analysis of the interest rates or analysis of the quotation.

Analysis of interest rates

- Whether a currency is at a premium or discount depends on the interest rates.

Base currency		Quote currency		
If interest rate	< is less than	Interest rate	=	Premium
If interest rate	> is greater than	Interest rate	=	Discount

Analysis of the quotation

- Forward rates are quoted with bid and offer rates, just like spot rates. The market user sells at the bid rate and buys at the offer rate.

Bid	> is greater than	Offer	=	Discount
Bid	< is less than	Offer	=	Premium

For example, using hypothetical rates, if the spot rates and one-month forward points are:

	GBP/USD	EUR/USD
Spot	1.2500–1.2520	1.1640–1.1660
One month	20-19	15-16

then the forward rates for GBP/USD and EUR/USD are:

- **GBP/USD** – the bid rate for the one-month forward is higher than the offer. This means that GBP/USD is at a discount and the forward points have to be subtracted. Hence:

GBP/USD	Bid	Offer
Spot	1.2500	1.2520
Forward points (discount)	20	19
Outright forward rate	1.2480	1.2501

- **EUR/USD** – the bid rate for the one month forward is lower than the offer rate. This means that EUR/USD is at a premium and the forward points have to be added to spot rate. Hence:

EUR/USD	Bid	Offer
Spot	1.1640	1.1660
Forward points (premium)	15	16
Outright forward rate	1.1655	1.1676

3. Bonds

Learning Objective

3.3.1 Know the key features of bonds: risk; interest rate (including negative interest rates); repayment; trading; nominal value and market price; coupon; credit rating

3.3.2 Understand yields: **running yields**; yields to redemption; capital returns; volatility and risk; yield curves

A bond is, very simply, a loan. A company or government that needs to raise money to finance an investment could borrow money from its bank or, alternatively, it could issue a bond to raise the funds it needs by borrowing from the investing public.

A bond, therefore, is a debt security – in other words, a security that represents a loan made to a third party. When an investor (known as the holder) buys a bond, they are lending money to a government, a corporation or other entity (known as the issuer). In return, the issuer promises to pay a specified rate of interest or return during the life of the bond to the investor and to repay the principal on a specified maturity date.

3.1 Main Features of Bonds

Bonds are often referred to by different names. Some you may commonly encounter include – bonds, debt securities, credit instruments, loan stock and fixed-interest securities. Bonds will typically have certain basic characteristics.

A fixed-interest security can be defined as a tradable negotiable instrument issued by a borrower for a fixed term, during which a regular and predetermined fixed rate of interest based upon a nominal value is paid to the holder until it is redeemed, and the principal is repaid.

There is a wide variety of bonds in issue, but the main characteristics of bonds can be described by looking at an example of a US Treasury Bond, such as 2% Treasury Bond 2041. This bond was issued by the US Government in November 2021 and is due to mature in 2041. As an example, we will assume that an investor subscribed to issue for $10,000 nominal of the bond.

Issuer and Bond Title

The issuer is the organisation that issues the bond and is raising finance. In this case, it is the US government. Bonds can be issued by a wide range of borrowers, including supranationals (eg, the World Bank), governments, government agencies, local government and companies.

The bond's title will usually indicate who the issuer is and the type of bond.

Issue

Bonds can be issued using different methods, depending upon whether the issuer is a government or a company:

- Governments are some of the largest borrowers in the world, so have their own agencies that deal with issuing bonds. They issue bonds frequently, to borrow money to cover their net cash requirements (ie, to meet the gap between the amount received in taxes and the amount required for government spending).
- In contrast, companies issue bonds to raise capital for a variety of reasons, such as to grow the business or to purchase equipment; hence, they issue bonds infrequently. They therefore require the specialist services of corporate finance firms.

When a bond is first issued, it is described as being issued in the **primary market** to distinguish it from later sales and purchases of the bond that take place in the secondary market (eg, on a stock exchange).

Bonds will be issued at a price that is usually expressed as an amount per £100, $1,000, €100 (and so on) nominal of stock. This can be at par, which simply means that £100 etc of stock is issued at a price of £100 etc or it can be at a discount or premium to par. In our example of 2% Treasury Bond 2041, this was issued at an average price of approximately 98.94 which means that an investor who subscribed for $10,000 nominal of the bond paid $9,894. (Note that the convention in bond markets is that prices are quoted per £100 etc nominal of a bond.)

In the US, it is common for bonds to have a nominal value of $1,000, but there are instances where they may have a nominal value of $100 – as is the case with 2% Treasury Bond 2041 in our example.

Nominal Value

A bond's nominal (or par or face) is the amount of stock purchased and should not be confused with the amount invested or the cost of purchase. This is the amount on which interest will be paid and the amount that will eventually be repaid. It is also known as the 'par' or 'face' or ' principal' value of the bond.

In our example, the nominal amount that the investor subscribed and paid for is $10,000. This should not be confused with the amount that they paid to acquire it (ie, $9,894) or its current market value.

Coupon

Most bonds are issued with a predetermined fixed rate of interest, known as the bond's **coupon**.

In contrast, index-linked bonds (ILBs), also known as inflation-linked bonds and inflation-protected securities, pay coupons and redemption proceeds are adjusted for the impact of inflation. The lag between the movement in the inflation index and the adjustment to the bond's cash flow is typically three months.

In addition, **floating rate notes (FRNs)** pay coupons that are adjusted periodically in line with an interest rate, such as the sterling overnight index average (SONIA) in the UK or the secured overnight financing rate (SOFR) in the US. SONIA and SOFR both measure the cost of borrowing cash overnight in their respective currencies, albeit in different ways.

Whichever type of bond is issued, coupons can be expressed either in nominal terms or, in the case of inflation-linked bonds (ILBs), in real terms. The coupon may be paid annually, semi-annually or quarterly, with the frequency depending on the country of issue and the terms of the bond.

Continuing with our example, the coupon is 2%. As it is a bond issued by the US government, the coupon is paid in two equal instalments. At issue of the bond, the issuer will set out when the interest payments are to be made – in this case, they will be made on 5 May and 15 November of each year.

However, some bonds are issued without any coupon at all. These bonds, called zero coupon bonds (ZCBs), are instead issued at a discount to their nominal value, but are redeemed at par, thereby providing their entire return as a capital gain.

The amount received by the investor is calculated by multiplying the nominal amount by the coupon and then dividing it into equal parts – in this case, two. Our investor acquired $10,000 nominal of the Treasury Bond so, will receive $200 of interest, which will be paid in two equal half yearly payments of $100 each on 15 May and November.

Redemption Date

Also known as the maturity date, this is the date at which the issue expires. The issuer will repay the nominal amount of the bond to the lender – in this case, $10,000. Again, you should not confuse this amount with what the investor paid to acquire the bond or its market value at any point.

Although most bonds have a fixed redemption date, occasionally some are dual-dated bonds, in that they have two redemption dates, between which the bond is redeemed by the issuer.

Callable bonds have a call provision, which gives the issuer the option to buy back all or part of the issue before maturity at one or a series of specific dates. This is attractive to the issuer as it gives it the option to refinance the bond (ie, replace it with one at a lower rate of interest) when interest rates are lower than the coupon currently being paid. This is a disadvantage, however, to the investor, who will probably demand a higher yield as compensation. Call provisions can take various forms. There may be a requirement for the issuer to redeem a specified amount at regular intervals.

Some bonds are issued with put provisions; so-called puttable bonds give the bondholder the right to require the issuer to redeem early, on a set date or between specific dates. This makes the bond attractive to investors and may increase the chances of selling a bond issue in the first instance. It does, however, increase the issuer's risk that it will have to refinance the bond at an inconvenient time.

Other types of bonds are irredeemable, meaning that they have no fixed date when they have to be repaid by. These bonds, called irredeemable or perpetual bonds, mature when the issuing entity decides to redeem it. This may occur under specific conditions outlined in the bond agreement, or it may effectively never mature if the issuer continues to pay the coupons indefinitely. Investors in irredeemable bonds must rely on the ongoing ability and willingness of the issuer to make these perpetual interest payments.

While most bonds are redeemed in cash at maturity, **convertible bonds** instead confer a right on the holder to convert into other bonds or, if issued by a company, into its **ordinary shares**, on pre-specified terms and on predetermined dates.

Market Value

The feature that distinguishes a bond from most loans is that a bond is tradable so an investor who subscribed at issue can sell it later at any time before the bond matures. The price of a bond in the secondary market depends on demand and supply, and is heavily influenced by the current level of interest rates and the time to maturity, among other factors.

The market value can be calculated as follows:

Market value = Current price x Nominal value

For example, if the price of the bond is $78.12 then the market value of the investor's holding is $7,812. Hence, the investor would be sitting on a capital loss of $2,082 (ie, the acquisition cost of $9,894, less the market value of $7,812).

While capital gains on a directly-held government bond (among others) is not necessarily subject to capital gains tax (CGT), neither will losses be allowable – in other words, capital losses cannot be used to offset other taxable gains. Note that the rules depend on the jurisdiction in which the investor resides and the specific tax regulations that apply.

Security

Other distinguishing features of bonds are the security and redemption provisions that are attached to them. Government bonds typically have no security and holders rely on the government to honour their obligations to pay the interest and repay the principal (as is the case with our example of a US Treasury bond). Bonds issued by companies, however, may have security and repayment provisions that are different than a government bond.

When a company is seeking to raise new funds by way of a bond issue, it will often have to offer security to provide the investor with some guarantee for the repayment of the bond. This could take the form of a fixed or floating charge over its assets, or some other form of guarantee:

- A fixed charge is a legal charge (or mortgage) specifically placed upon one or a number of the company's fixed (or permanent) assets. In the event that a company does not honour its obligations to pay interest or the maturity value, the holders of the bond have priority to be paid from the proceeds of the asset that is secured before other creditors. Such bonds carry different names, but are usually referred to as secured bonds.

- A floating charge places a more general charge on the company's assets that continually flow through the business and whose composition is constantly changing – eg, the issuing company's stock-in-trade. If a company goes into liquidation, the holders of secured bonds with fixed charges have priority for payment over floating charges.

When there are multiple types of debt, the issuer will have to establish an order of priority as to which debt will be serviced and the so-called seniority within the entity's capital structure in the event of financial difficulties leading to a restructuring or liquidation. Some may be secured, some rely on a floating charge, and some may be subordinated to both in return for a greater return in exchange for greater risk.

3.2 Classification of Bonds

Bonds are usually classified according to the issuer, their structure or defining characteristics and the market into which they are issued.

Classification of Bonds	
Issuer	• Most bonds are issued by governments and supranational organisations (known collectively as sovereign borrowers), companies and, to a lesser extent, local government authorities.
Structures	• Bond structures can range from conventional (or straight) issues to ones that have other unique features. • Examples of such bonds include index-linked bonds (ILBs), convertible bonds, ZCBs, floating rate notes (FRNs), and bonds with provisions for early repayment (eg, callable bonds and puttable bonds). • Unsecured, secured or securitised.
Where issued	• Bonds may be issued into the issuer's own domestic bond market. • They may also be issued internationally in one or across a range of bond (or debt) markets.

3.3 Types of Bonds

In this section, we will look at the features of bonds issued by governments and companies.

3.3.1 Government Bonds

Governments issue a range of different types of bonds to finance their spending and investment plans, and to bridge the gap between their actual spending and the tax/other forms of income that they receive. The main types encountered are conventional fixed-interest bonds with a range of maturity dates, and index-linked bonds (ILBs).

To bring out the main features of government bonds (or government debt), we will look at US government bonds as an example. Government bonds issued by the US government are known as 'Treasuries' and there are four main marketable types, as described below.

US Treasuries	
Treasury bills	• Treasury bills are a money market instrument used by governments to finance their short-term borrowing needs. • They have maturities of less than a year and are typically issued with maturities of 28 days, 91 days or 182 days. • They are ZCBs, so pay no interest, and instead are issued at a discount to their maturity value. • Once issued, they trade in the secondary market and are priced at a discount (ie, below their nominal value at maturity).
Treasury notes	• Treasury notes are conventional government bonds that have a fixed coupon and redemption date. • They have maturity dates ranging from two to ten years, and are commonly issued with maturities of two, five or ten years.
Treasury bonds	• Treasury bonds are again conventional government bonds, but with longer maturities of between ten and 30 years.
Treasury inflation-protected securities (TIPS)	• These bonds are ILBs. • The nominal value of the bond that is repaid at maturity is adjusted based on movements in the relevant country's inflation index, such as **consumer prices index (CPI)** or retail price index (RPI), to account for the impact of inflation. Similarly, interest payments are paid half yearly and adjusted for inflation.

There is also another instrument known as **separate trading of registered interest and principal securities (STRIPS)**. STRIPS are based on the stripped elements of Treasury notes, bonds and TIPS. Each bond is divided into its underlying cash flows, meaning each individual interest payment and the single maturity payment. Each cash flow is then traded as a separate ZCB.

3.3.2 Corporate Bonds

Corporate bonds, also known as corporate debt, represent money borrowed by a company that must be repaid.

A corporate bond is a bond that is issued by a company to raise finance. The term is usually applied to longer-term debt instruments with a maturity date of more than 12 months; the term commercial paper (CP) is used for instruments with a shorter maturity. Most corporate bonds are listed on stock exchanges, but the majority of trading in most developed markets takes place in the over-the-counter (OTC) market – that is directly between market counterparties.

There are a wide variety of corporate bonds. Some of the main types are described below:

Types of Corporate Bonds	
Medium-term notes (MTNs)	• MTNs are standard corporate bonds with maturities ranging from nine months to ten years, although the term can also apply to instruments maturing up to 30 years. • Where MTNs differ from other debt instruments is that they are offered to investors continually over a period of time by an agent of the issuer, instead of in a single tranche of one, sizeable, underwritten issue. • The market originated in the US to close the funding gap between CP and long-term bonds.
Fixed-rate bonds	• The key features of fixed-rate bonds have already been described above. • Essentially, they have fixed coupons which are paid either quarterly half-yearly or annually (depending on the terms of the bond) at predetermined redemption dates.
Floating-rate notes (FRNs)	• FRNs are bonds that have variable rates of interest. • The rate of interest will be linked to a benchmark rate (eg, SONIA or SOFR). • An FRN will usually pay interest at a benchmark rate plus a quoted margin or **spread**.
Convertible bonds	• A convertible bond is a conventional fixed-rate bond that carries the right to convert into the shares of the issuer of the bonds. • In contrast, exchangeable bonds, if exercised, provide the bond holder with shares of a company other than the issuer of the bonds. • The terms on which the bond can be converted will be determined at issue and the holder will have periodic opportunities to exercise their right to convert. • If the option to convert is not exercised, the bond reverts to being a conventional bond and is repaid on its maturity date.
Zero coupon bonds (ZCBs)	• A ZCB is a bond that pays no interest. Instead, it is issued at a discount to its nominal value and is eventually redeemed at the full nominal value. • All of the return is provided in the form of capital growth rather than income.

Apart from the type of bond and the issuer, other distinguishing features of corporate bonds are the security and redemption provisions that are attached to them.

When a company is seeking to raise new funds by way of a bond issue, it will often have to offer 'security' to provide the investor with some guarantee for the repayment of the bond. In this context, security usually means some form of legal charge or pledge over the issuer's assets (eg, its property, buildings or trade assets) so that, if the issuer defaults, the bondholders have a claim on those assets before other creditors; therefore, bondholders can regard their borrowings as safer than if there were no security. In some cases, the security may also take the form of a third-party guarantee – for example, a guarantee by a bank that, if the issuer defaults, the bank will repay the bondholders. The greater the security offered (hence the lower the risk), the lower the cost of borrowing should be.

Most bonds will have a fixed redemption date at which point the nominal value of the bond will be repaid.

3.4 Investment Returns from Bonds

Like equities, the return from bonds comprises two elements:

- The income returns from coupons paid during the bond's life.
- Any gain or loss made between the date of acquisition and when the bond is repaid by the issuer or sold by the holder, resulting from price movements during the period that the bond is held.

If a bond is purchased when issued at par and held to redemption, then, assuming it is redeemed at par, the return will simply comprise the coupon payments received over the term of the bond. However, if a bond is not purchased at par and/or not held to redemption, then its return will also be determined by the difference between the price at which it was purchased and that at which it is subsequently sold or redeemed – ie, the capital gain or loss.

In normal circumstances, this return will be positive, as the cumulative coupon income received usually outweighs any potential adverse price changes. However, a few years back, when governments were targeting ultra-low interest rates, the returns on many government bonds were negative, as many bonds were issued with extremely low or even zero coupons. A negative bond yield occurs when an investor receives less money on the bond's maturity than the original purchase price of the bond. Recall that capital gains on most bonds are not subject to capital gains tax (CGT), but neither are losses allowable.

Yields are a measure of the returns to be earned on bonds. Two key measures in this regard are **flat yields** and the **gross redemption yield (GRY)**.

3.4.1 Flat Yields

The coupon payable on a bond reflects the interest rate payable on the nominal or principal amount. However, an investor may have paid a different amount to purchase the bond, so a method of calculating the true return is needed.

The simplest approach to establishing the return from a bond is to calculate its flat yield, also known as the running or interest yield. This expresses the coupon as a percentage of the market price of the bond. (The market price is also known as the **clean price**, which is the price that excludes any interest that has accrued since the last interest payment. The **dirty price** is when accrued interest is added on.)

The formula for calculating the flat yield of a bond is:

$$\text{Flat yield (\%)} = \frac{\text{Coupon}}{\text{Clean price}}$$

The flat yield is calculated by dividing the annual coupon by the bond's price, and then multiplying by 100% to obtain a percentage. The bond's price is typically stated as the price payable to purchase £100, $1,000, €100 (and so on) nominal value.

Example

A bond with a coupon of 5%, issued by XYZ plc, redeemable in 2030, is currently trading at £100 per £100 nominal. The flat yield is the coupon divided by the price expressed as a percentage, ie, £5/£100 = 0.05 or 5%.

A bond with a coupon of 4%, issued by ABC plc, redeemable in 2035, is currently trading at £78 per £100 nominal – ie, an investor could buy £100 nominal value for £78. The flat yield is the coupon divided by the price expressed as a percentage, ie, £4/£78 = 0.0513 or 5.13%.

A 5% Treasury stock repayable in 2028 is priced at £104. Hence, an investor could buy £100 nominal value for £104. The flat yield on this bond is the coupon divided by the price, ie, £5/£104 = 0.0481 or 4.81%.

We can use this approach to calculate the flat yield of the bond that we saw earlier of 2% Treasury Bond 2041 – we know that the annual coupon is 2% and the current price is $78.12, so the flat yield is:

$$\text{Flat yield (\%)} = \frac{2}{78.12} \times 100 = 0.0256 \text{ or } 2.56\%$$

The interest earned on a bond is only one part of its total return though, as the investor may also either make a capital gain or a loss on the bond if it is held to redemption. As we will see in the next sections, the GRY is a measure that incorporates both the income and the capital return (that is, assuming the investor holds the bond until its maturity) into a single figure.

3.4.2 Gross Redemption Yield (GRY)

The flat yield ignores the difference between the current market price and the nominal value. To remedy this, the GRY is used – also referred to as the **yield to maturity (YTM)** or yield to redemption. Simply put, the GRY is a combination of the flat yield plus the gain/loss that will occur if the bond is held until it is redeemed, to give an average annual compound return.

In the example above of 2% US Treasury Bond 2041 (which is priced at $78.12), the GRY will be higher than the flat yield, as the market price is lower than the bond's nominal value and the bond will generate a capital gain if held to maturity. However, if the market price was above par, then the GRY would be lower than the flat yield, as a capital loss would be made if the bond were held to maturity.

The GRY, then, gives a more accurate indication of the return that the investor receives, and can be used to compare the yields from different bonds to identify which is offering the best return.

The formula for the GRY is complex, but a simple way of calculating it is by using the following formula:

$$\text{GRY}(\%) = \text{Flat yield} + \left(\frac{\left(\text{Par} - \text{market price}\right) \div \text{Number of years to redemption}}{\text{Market price}} \right)$$

You should note that this will only produce a very approximate estimate of the GRY. The value of using the GRY can be seen by looking at the following example.

Example

Staying with the example above of 2% Treasury Bond 2041, we are assuming that the current price is $78.12 and that the bond has a flat yield of 2.56%. In 2041, the investor will receive the nominal value of the bond (ie, $100), as opposed to the current price, so will make a gain.

If an investor were simply to look at the flat yield, then it would give a misleading indication of the true return that they would earn. The true yield needs to take account of any gain/loss to redemption, and this is the purpose of the GRY.

To calculate the GRY using the simple method above, let us assume that the bond will repay in exactly 17 years' time. The investor will make a gain of $21.88 (ie, $100 – $78.12), which needs to be incorporated into the overall return from the bond. The GRY using this simplified method annualises the gain or loss which, in this case, is $1.2871 (ie, $21.88 ÷ 17). Hence, the GRY is:

$$\text{GRY}(\%) = 2.56 + \left(\frac{\left(100 - 78.12\right) \div 17}{78.12} \times 100 \right) = 2.56 + \left(\frac{1.2871}{78.12} \times 100 \right) = 2.56 + 1.65 = 4.21\%$$

The way in which it is calculated in practice is more complex, as each of the individual cash flows of a bond (ie, the coupon payments and the eventual capital repayment) are discounted to their net present value in order to find out the GRY. Fortunately, the GRY is calculated and quoted in the financial press and on websites.

The GRY can also be quoted on a net-of-tax basis so that a direct comparison can be made of the after-tax return to the investor.

However, as a yield measure, the GRY has its drawbacks. First, it assumes that the bond will be held to redemption. More fundamentally, though, it assumes that the interest payments can be reinvested at the same GRY over time, which may not be the case.

3.5 Risks

The main risks associated with holding bonds are the following:

- **Default risk** – the risk that interest payments and the repayment of the bond may not be made. Generally, default risk is considered to be lower for investment grade (ie, high quality) issues compared with non-investment grade (ie, junk, low quality) issues. Similarly, default risk is

considered to be lower for developed market government bonds than for corporate bonds, as mature sovereigns have deeper access to capital and could resort to emergency measures such as an immediate taxation levy, contrary to corporates. However, this will vary depending on the specific market environment and the issuer.

- **Market or price risk** – the risk that movements in interest rates have a significant impact on the value of bond holdings.
- **Unanticipated inflation risk** – the risk of inflation rising unexpectedly and its effect on the real value of the bond's coupon payments and redemption payment.
- **Liquidity risk** – where bonds are not easily or regularly traded, and can, therefore, be difficult to realise at short notice or can suffer wider-than-average dealing spreads.
- **Exchange rate risk** – where bonds are denominated in a currency other than that of the investor's home currency, so are potentially subject to adverse exchange rate movements.

There are a number of further risks attached to holding corporate bonds, notably the following:

- **Early redemption risk** – the risk that the issuer may invoke a call provision if the bond is callable.
- **Seniority risk** – the risk attached to the seniority with which corporate debt is ranked in the event of the issuer's liquidation.

Of these risks, market risk and default risk are of principal concern to bondholders.

3.5.1 Market Risk

Although bonds are generally less risky than equities, their prices are intrinsically linked to the general level of interest rates and expectations of future changes. Changes in interest rates and yields will, therefore, affect the prices of all bonds and bring about the risk of volatility in bond prices.

Price (or market) risk is of particular concern to bondholders who are open to the effect of movements in general interest rates, which can have a significant impact on the value of their holdings. This is best explained by two simple examples.

Examples
• Interest rates are approximately 5%, and the government issues a bond with a coupon rate of 5%. Three months later, interest rates have doubled to 10%. What will happen to the value of the bond? • The value of the bond will fall. Its 5% interest is no longer attractive, so its resale price will fall to make the return offered more competitive.
• Interest rates are approximately 5%, and the government issues a bond with a coupon rate of 5%. Interest rates generally fall to 2.5%. What will happen to the value of the bond? • The value of the bond will rise. Its 5% interest is very attractive, so its resale price will rise to compensate, and make the return it offers more realistic.

As the above examples illustrate, there is an inverse relationship between interest rates and bond prices:

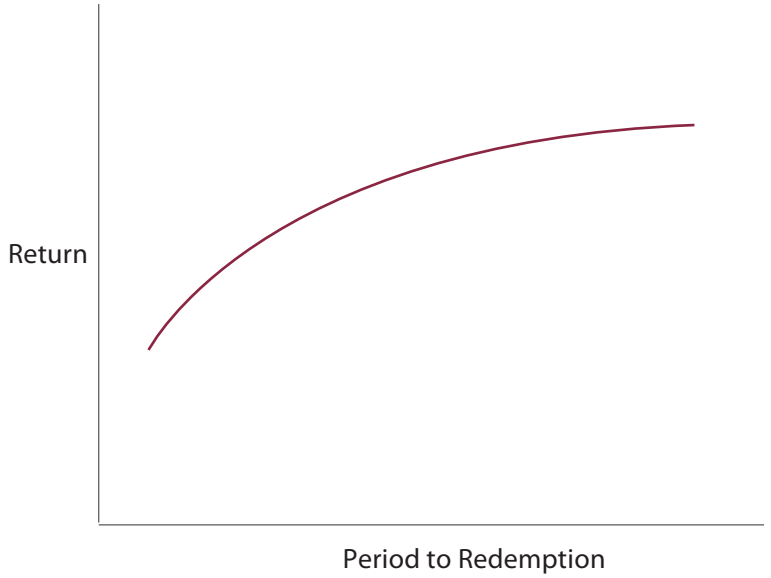
- If interest rates increase, bond prices will decrease.
- If interest rates decrease, bond prices will increase.

As long as the interest being paid on the government bond is near to the interest rate available on the market, there is little risk that the resale value will be significantly different from the purchase price. In other words, the government bond has price risk or market risk only when the coupon rate of interest differs markedly from market rates.

In both examples in the table above, the amount by which the price of the bond will fall or rise, respectively, will depend on its sensitivity to changes in interest rates, called **duration**:

- Longer-dated bonds are generally more sensitive to interest rate changes than short-dated bonds, because holders are exposed to risk for a longer period.
- Lower-coupon bonds are generally more sensitive than higher-coupon bonds because a change in interest rates is proportionally greater for lower-coupon bonds.
- Similarly, lower-yielding bonds are more sensitive than higher-yielding bonds.

This link between maturity and yield can be seen via the **yield curve**. The yield curve (as shown in the diagram below) illustrates the different rates of return that can be obtained in the market for similar debt instruments with different maturities.



Although a yield curve can assume a range of different shapes, in normal market circumstances, it is described as being 'positive' – ie, it slopes upward, as in the diagram. The rationale for this is that the longer an investor is going to tie up capital, the higher the rate of interest they will demand to compensate themselves for the greater risk, and **opportunity cost**, on the capital they have invested.

However, yield curves can also be flat or inverted. A flat yield curve occurs when short-term and long-term interest rates are very close to each other – this suggests that investors expect little change in economic conditions in the near future, so a flat yield curve can be an indicator of economic uncertainty

or a transition period between economic phases. An inverted yield curve happens when short-term interest rates are higher than long-term rates – as investors expect future interest rates to be lower than current rates, an inverted yield curve is often seen as a predictor of economic recession.

Negative Interest Rates

Interest rates are typically positive, meaning that lenders receive interest payments from borrowers, compensating for the opportunity cost of lending money and the risk of default. Positive interest rates encourage saving and investment, as they provide a return on savings and create an incentive to lend money or invest in financial products.

However, interest rates can occasionally be negative. This occurs when central banks set their policy rates below zero to stimulate economic activity during periods of severe economic downturns or deflation. The theory behind this is that negative interest rates mean that depositors receive very low or even zero interest rates, or may even have to pay fees to the bank to keep their money there; as this makes saving unattractive, depositors will instead spend the money, thus helping to boost the economy.

Negative interest rates pose additional risks to bonds. When interest rates are negative, bondholders effectively pay to lend money, which can lead to losses in nominal terms if bonds are held to maturity (albeit investors may be more focused on real returns in such an environment, hence their willingness to buy such bonds at negative yields). This unusual scenario can distort bond prices, reducing their appeal and liquidity in the market. Negative rates also squeeze the yields on new bonds, making it challenging for investors to find profitable opportunities. Further, the presence of negative rates often signals deep economic problems, which can increase uncertainty and volatility in the bond market.

3.5.2 Default Risk

Default risk arises when a debtor fails to meet their legal obligations, either by missing a scheduled payment or violating a loan covenant. It is a subset of credit risk, which encompasses the broader risk that counterparties may fail to honour their obligations.

Investors in bonds face the risk of the issuer defaulting on their payment obligations. Default risk can be assessed by reference to the independent credit rating agencies. These agencies assign ratings to many bonds at issuance, and monitor developments during the bond's lifetime. The table below shows the credit ratings available from the Big Three: Moody's, Standard & Poor's (S&P) and Fitch Ratings.

Bond Credit Ratings				
Credit Risk		**Moody's**	**Standard & Poor's (S&P)**	**Fitch Ratings**
Investment Grade				
Highest quality	Very strong	Aaa	AAA	AAA
High quality		Aa	AA	AA
Upper medium grade	Strong	A	A	A
Medium grade		Baa	BBB	BBB

Bond Credit Ratings				
Non-Investment Grade / Speculative / High Yield / Junk				
Lower medium grade	Somewhat speculative	Ba	BB	BB
Low grade	Speculative	B	B	B
Poor quality	May default	Caa	CCC	CCC
Most speculative		C	CC	CC
No interest being paid or bankruptcy petition filed			D	C
In default				D

Moody's refines its ratings by adding a 1, 2 or 3 to show the relative standing within a category, with 1 indicating the highest standing and 3 the lowest; for example, within the Aa category, Aa1 is higher quality than Aa2, which in turn is higher than Aa3. S&P and Fitch Ratings instead use a '+' or '-' sign – eg, BBB+ is higher quality than BBB, which is higher than BBB-.

As you can see from the above table, bond issues subject to credit ratings can be divided into two distinct categories:

- Those accorded an investment grade (IG) rating. Investment grade issues offer the greatest liquidity and certainty of repayment. Bonds rated in the BBB category or higher are considered to be investment grade. Very few organisations, with the exception of supranational agencies and some Western governments, are awarded a triple-A rating, although the bond issues of many large corporations boast a credit rating within the investment grade categories.
- Those categorised as non-investment grade (also known as speculative, high yield (HY) or junk bonds). They are more susceptible to a sharp economic slowdown or recession than their investment grade counterparts, as they have weaker financials (eg, higher debt and/or lower cash reserves). Further, these bond markets are very illiquid; hence, non-investment grade bonds are better suited to long-term investors (eg, pension and sovereign wealth funds).

Note that these terms are not actually used by the agencies, but inferred by industry practice.

4. Property

Learning Objective

3.4.1 Know the key features of property investment: direct property; property funds; real estate investment trusts (REITs)

The increasing popularity of property as an investment over the years has made this mainstream asset class an essential component of many investment portfolios. In this section, we will look at the main features of the property market and how investors can gain access to this asset class.

There are a number of ways in which individuals can invest in property, including:

- constructing a portfolio of directly owned properties
- investing in listed property companies or real estate investment trusts (REITs), or
- investing in property mutual funds and similar vehicles.

We will now look at direct and indirect property investments in turn.

4.1 Direct Property Investment

As an asset class, property can provide positive benefits to an investor.

The advantages are:

- real long-term returns allied to low volatility and a reliable stream of income
- attractive absolute returns, especially against inflation when measured over sufficiently long periods (ie, at least ten years)
- portfolio diversification, and
- relatively low **correlation** with other asset classes (eg, bonds and equities), thus supplying diversification.

As an asset class, property is unique in its distinguishing features:

- Each individual property is unique in terms of location, structure and design.
- Valuation is subjective, as property is not traded in a centralised marketplace, and continuous and reliable price data is not available.
- It is subject to complex legal considerations and high transaction costs upon transfer.
- It is highly illiquid as a result of not being instantly tradeable.
- Since property can only be purchased in discrete units, diversification is difficult.
- The supply of land is finite and its availability can be further restricted by legislation and local planning regulations. Therefore, price is predominantly determined by changes in demand.

If an investment manager decides to include an allocation to property within a portfolio that they are managing, then they need to consider whether exposure to the residential or commercial sector is appropriate. It is therefore important to understand the differences between the two. Some of the key differences are:

	Residential Property	Commercial Property
Direct Investment	Range of investment opportunities including second homes, holiday homes and buy-to-let	Size of investment required means direct investment is limited to property companies and institutional investors
Tenancies	Typically, short renewable leases	Long-term contracts with periods commonly in excess of ten years
Repairs	Landlord is responsible	Tenant is usually responsible
Returns	Largely linked to increase in house prices	Significant component is income return from rental income

Direct investment in property confers a number of advantages. As an asset class, it has provided positive real long-term returns, through rental income and/or capital appreciation allied to low volatility and a reliable stream of income. An exposure to property can also provide diversification benefits owing to its low correlation with both traditional and alternative asset classes (although that correlation can quickly increase during periods of market stress).

However, as with other asset classes, property is cyclical and vulnerable to asset price bubbles, as has been seen in many markets. Property had enjoyed rising prices in the decade prior to the global financial crisis, with no significant falls, and many investors came to believe that property was a one-way bet and could only go on rising; the subsequent falls in the property market reinforced the point that property prices can fall as well as rise. Furthermore, the lack of liquidity and high transaction costs associated with property make direct investment in multiple properties more suitable as an investment medium for large investment funds such as pension funds or very wealthy investors.

What is also fundamentally different about property from other assets is the price. Only the largest investors can purchase sufficient properties to build a diversified portfolio. Such investors may tend to avoid residential property and instead concentrate on commercial and industrial property and also farmland (ie, agricultural property). Smaller investors wanting to include property within a diversified portfolio may instead seek indirect exposure to property, which can be obtained through either a collective investment scheme (eg, REITs) or shares in publicly quoted property companies.

The risks associated with property investment include the following:

Property Risk

- The location of the property.
- The effect of the use of the property on its value.
- The credit quality of the tenants.
- The length of the lease.
- The lack of daily valuations/transparency.

The main disadvantage of property is that, as its location and management are key to its profitability, it is not a standardised product in which to invest and, therefore, requires more research and understanding to comprehend any risks involved.

Market Risk

- The effect of changes in interest rates on valuations.
- The performance of individual property sectors.
- The prospects for rental income growth.

Investment Vehicle Risk

- The liquidity of indirect investment vehicles.
- The diversification of the underlying portfolios.
- The level of gearing.

While property holds a valuable place in a well-diversified portfolio, its risks and lack of liquidity should not be overlooked. The global financial crisis saw the values of both residential and commercial property fall significantly. Investors were unable to readily sell their properties, and property funds imposed redemption moratoria, as fund managers tried to restrict the damage that flooding the market with forced sales would have caused. In some countries, this pattern was repeated again during the onset of the COVID-19 pandemic, resulting in funds once again imposing redemption delays. It is noteworthy that the underlying reasons for these restrictions varied: during the global financial crisis, property values sharply declined as investors faced financial distress, whereas during COVID-19, the imposition of lockdowns made it challenging (if not impossible) to conduct reliable property valuations.

4.2 Property Funds

Unsurprisingly, there is a wide range of property funds available. There is no single classification method in use. They can be differentiated in a number of ways, including whether they are:

- listed or unlisted funds
- **open-ended** or **closed-ended**
- traded on a stock exchange (eg, REITs, property exchange-traded funds (ETFs)) or directly with the managers of the fund (eg, property mutual funds)
- available to private investors, or to institutional investors only
- structured as companies, partnerships, trusts or contractual agreements, and
- low risk or high risk

In terms of risk, it is standard practice to distinguish four main varieties of property fund:

- **Core funds** – lower-risk and lower-return funds that are usually open-ended and which aim to produce returns that are benchmarked against an established property index.
- **Core-plus funds** – associated with a low to moderate risk profile, as the properties are of a similar high quality to core funds and are well occupied, but a key difference is that they tend to use between 40% and 60% leverage to achieve higher returns.
- **Value-added funds** – synonymous with growth, using higher gearing (between 60% and 75%) and a more **active management** style to generate higher returns.
- **Opportunistic funds** – typically, these are closed-ended and aim to exploit opportunities to acquire property from distressed sellers, redevelopments and in emerging markets; they are similar in nature to private equity funds.

Property investors should be mindful of three key areas: volatility, diversification and liquidity. They should also be wary of funds that are too concentrated in one particular sector or region; a good spread of properties across retail, office and industrial should diversify sector-specific risks.

Investors should also be cautious of the different liquidity risks posed by open-ended property funds. In general, property funds typically offer liquidity to investors, who can redeem their shares/units at any time, with proceeds typically distributed within a few days. However, property markets are less liquid – it can take six months, if not longer, for the property to be sold. To address this liquidity mismatch, the UK's FCA proposed a 180-day notice period for redemptions from open-ended property funds, leading to the introduction of long-term asset funds (LTAFs) in 2021. This issue is also being considered by other

regulators globally. (Note that closed-ended funds and indirectly invested open-ended property funds do not face liquidity issues, as shares are traded on the stock market or the underlying property shares can be sold respectively.)

4.2.1 Real Estate Investment Trusts (REITs)

Simply put, a REIT is a company that owns and operates income-producing real estate, whether commercial or residential. Where it differs from a quoted company that holds a portfolio of property is that the REIT is not liable to tax on any income or gains made on the property portfolio and instead distributes this as income, with any tax liability arising on the shareholder. This avoids the problem of double taxation. This is normally subject to the REIT making qualifying conditions.

REITs are well established in countries such as the US, Australia, Canada, France, Japan, Singapore and Hong Kong. In some countries, REITs are required by law to maintain **dividend** payout ratios of at least 90%, making them a favourite for income-seeking investors. REITs can deduct these dividends and avoid most or all tax liabilities, though investors still pay income tax on the payouts they receive. Many REITs have dividend reinvestment plans (DRIPs), allowing returns to compound over time.

Example

IIn the UK, if an investor holds property company shares, then not only does the company pay corporation tax but the investor is liable to income tax on any dividends and CGT on any growth.

Under the rules for REITs, the investor remains liable for income tax on the distributed profits and to CGT on any gain made on sale. However, a key difference is that no corporation tax is payable, providing that at least 90% of profits are distributed to shareholders.

Specialist property investment firms will construct new issues of REITs to meet demand. Where a particular REIT is targeting an attractive opportunity, the new issue may well be oversubscribed, which may have an effect on prices and yields.

REITs are quoted and traded on a stock exchange in the same way as any other shares. This means that they are liquid, so are easy to buy and sell and can be readily realised. The price at which they trade is determined by demand and supply, so they may trade at a premium or discount to the net asset value (NAV) of the underlying property portfolio. They are, therefore, a type of closed-ended fund.

REITs give investors access to professional property investment and provide new opportunities, such as the ability to invest in different geographical areas or property sectors. This will allow them to diversify the risk of holding direct property investments. This type of investment company also removes a further risk from holding direct property investments, namely liquidity risk, or the risk that the investment will not be able to be readily realised.

The number of property companies globally has expanded dramatically over the years. This has been a result of the very strong performance of property, which has resulted in a widespread growth in the number of REITs.

4.2.2 Investing in Property Funds

The illiquid nature of property makes investment through property funds a practical proposition for investors. Some of the factors that should be considered when investing in property funds are:

- asset price bubbles
- the relative liquidity of property companies versus investment funds
- permitted levels of gearing, and
- redemption charges and notice periods.

Stock exchange-listed funds can be traded easily on a daily basis and, although the pricing is linked to the NAV of the underlying property portfolio, prices can deviate from the NAV. By contrast, mutual funds will trade at the NAV but cannot necessarily be traded daily, as many funds have monthly or quarterly valuation points.

Property funds can have levels of gearing that vary from 0% to 90%, with many funds limited to between 50% and 70%. Gearing can enhance returns but introduces risk. The adviser should be aware of the type of property fund that is being considered and its level of gearing and assess the risk/reward profile against the investor's risk tolerance.

Investors and advisers/portfolio managers should be aware of the frequency at which investment funds can be redeemed with the fund managers as well as whether the fund manager can impose redemption penalties or notice periods. As mentioned earlier, recent years have seen a number of property funds impose redemption penalties to deter investors from realising their investment, and forcing the property fund to sell at distressed prices. Others imposed notice periods of 12 months, effectively locking investors into the funds.

5. Equities

Learning Objective

3.5.1 Understand the following types of equity and equity-related investments: types of shares – ordinary, common, preference, other; American and global depositary receipts; warrants and covered warrants

Historically, equities have delivered superior returns compared to other asset classes over the long term. However, these returns came at a price, as equity markets can be highly volatile and the level of risk associated with holding equities is significantly greater than with other asset classes.

Shares carry the full risk and reward of investing in a company. If a company does well, its shareholders benefit. However, if the company does badly in terms of profitability, it is the shareholders that suffer in terms of the decline in the asset class price.

Shareholders may receive annual dividends if declared by the company. As the providers of risk capital to the company, it is the shareholders who vote 'yes' or 'no' to each **resolution** put forward by the company directors at company meetings.

If the company closes down (often described as the company being wound up or liquidated), the shareholders are paid after everybody else. If there is nothing left, the ordinary shareholders (who rank at the bottom of the capital structure) get nothing. If there is plenty of money left, it all belongs to the ordinary shareholders.

5.1 Types of Shares

Shares can principally be divided into two categories, namely ordinary shares and preference (or preferred) shares. They are known by various titles from country to country but, although the title varies, they retain the same basic characteristics. The differences are around the level of income received and voting rights of the two share classes.

5.1.1 Ordinary Shares

To create a company for the first time, individuals, families, business partners or investors get together and, after completing the legal formalities to create the company, will subscribe to the initial capital that the company needs to begin trading.

Each of these parties will contribute a proportion of the initial capital or a share of the capital, hence where the word 'shares' comes from.

Example

If a company was created for the first time, the investors might determine that it needed initial capital of £100,000 to commence trading. The subscription of this initial capital will be recorded in the company's books and the ownership will be recorded by the issue of shares. The issued **share capital** at the outset would be £100,000 and this could be divided into 100,000 ordinary £1 shares and each investor would receive a share certificate that recorded the number of shares they owned; historically, these certificates were physical documents, but today they are electronic.

In this example, the shares would be referred to as 'ordinary £1 shares'. Each share is therefore referred to as having a nominal value of £1. Once a company has been trading for some time, its value may be greater or less than the initial £100,000 but, whatever the value, they would continue to be ordinary £1 shares. In other words, after this initial period, the '£1' element in the title loses most of its significance.

As a result, every company has ordinary shares in issue. These investors are subscribing to the risk capital of the company, so the performance of their investment is closely tied to the fortunes of that company.

As part of the process of creating the company, directors will be appointed who will have the authority to manage the company on a day-to-day basis. The directors do so on behalf of the investors and, so that the shareholders can exercise their rights of ownership, they have the right to vote to reappoint directors or not, and to vote on key decisions.

Providing that the company makes sufficient profits, the shareholders can expect to share in those profits and so have the right to receive dividends proportionate to their shareholdings.

Ordinary shares with a nominal value are common in the UK, but they are also seen in Australia, Bahrain, China, Dubai, Singapore and Spain, among many other countries.

5.1.2 Common Shares

An alternative type of share is a common share, which is also sometimes referred to as common stock. Common shares are identical to ordinary shares in that they represent a proportionate share of the ownership of the company. They normally carry voting rights, are entitled to receive dividends and represent the risk capital of the company in exactly the same way as described above. Where they principally differ is that they have no nominal value.

Shares in US companies are the most obvious example of common shares, but they are also used in a number of other countries.

5.1.3 Preference Shares

In addition to ordinary shares, some companies may issue **preference shares** or preferred stock.

The terms on which preference stock is issued will vary from company to company, but they will typically have a higher claim on the assets and earnings of a company than ordinary shares or common stock.

Normally, preference shares are:

- **non-voting**, except in certain special circumstances such as when their dividends have not been paid
- **pay a fixed dividend each year**, the amount being set when they are first issued
- **rank ahead of ordinary shares/common stock** in terms of being paid back if the company is wound up, up to a limited amount to be repaid.

As a result, preference shares are less risky than ordinary shares/common stock, but also potentially less profitable. Holders generally do not have the right to vote on company affairs, but they are entitled to receive a fixed dividend each year as long as the company feels it has sufficient profits. These dividends must be paid before any dividends to ordinary shareholders; hence the term 'preference'.

Preference shares are usually only entitled to a fixed rate of dividend based on the nominal value of the shares (so a 6% preference £1 share would pay a gross annual dividend of £0.06 per share), payable only if the company makes sufficient profits and the board of directors declare payment of the dividend, but sometimes they may also be entitled to an additional variable dividend depending on the company's performance (participating).

Preference stock is often referred to as a hybrid security, as it has the characteristics of both debt and equity:

- preference shares are also similar to equities, as they are part of the share capital of a company and are entitled to dividends, but
- they are similar to debt, as their dividends carry a fixed return and are paid in priority over those on ordinary shares, and in case of a wind-up, preference shareholders are paid in preference over ordinary shareholders from the proceeds of liquidation.

Most preference shares in issue are cumulative, which means that the preference shareholders are entitled to receive all dividend arrears from prior years before the company can pay its ordinary shareholders a dividend. If the dividend is in arrears, this can sometimes give the preference shareholders voting rights. Some are non-cumulative; in which case any missed dividends do not accumulate and are not payable to preference shareholders in the future.

Example

ABC preference shares normally pay a dividend of €2 per share, and the company announces that they do not have the profits to meet this obligation. In the following year, assuming there are sufficient profits, cumulative preferred shares would pay a dividend of €4, whereas ordinary preferred shares would pay just the €2. The unpaid €2 from the previous period would be lost.

Other types of preference shares include the following:

- **Participating preference shares** – in addition to the right to a fixed dividend, these shares are also entitled to participate in the company's profits if the ordinary share dividend exceeds a prespecified level.
- **Redeemable preference shares** – these preference shares are issued with a predetermined redemption price and date. Some redeemable preference shares are issued as **convertible preference shares**.
- **Irredeemable preference shares** – there is no fixed date for the shares to be repaid and the capital would normally only be repaid in the event of the company being wound up. The amount that the investor would receive is the nominal value of the shares, provided there are sufficient funds, and they would be paid out before (in preference to) the ordinary shareholders.
- **Convertible preference shares** – these preference shares, as well as having a right to a fixed dividend, can be converted by the preference shareholder into the company's ordinary shares at a prespecified price or rate on predetermined dates. If not converted, then the preference shares simply continue to entitle the shareholder to the same fixed rate of dividend until the stated redemption date.

Note that preference shares can be one or more of these types simultaneously.

Example

An investor holds £1,000 of XYZ Bank 7 3⁄8% non-cumulative irredeemable preference £1 shares.

This means:

- The investor will receive a fixed dividend of 7 3⁄8 % each year, which is payable in two equal half-yearly instalments (eg, on 1 April and 1 November).
- The amount of the dividend is calculated by multiplying the nominal amount of shares held (£1,000) by the interest rate of 7 3⁄8%. This gives a total annual dividend of £73.75 gross, which will be paid in two instalments.
- The dividend will be paid provided that the company makes sufficient profits, and has to be paid before any dividend can be paid to ordinary shareholders.
- The preference shares are non-cumulative, so if the company does not make sufficient profits to pay the dividend, then it is lost and the arrears are not carried forward.
- They are also irredeemable, so there is no fixed date for the shares to be repaid and the capital would normally only be repaid in the event of the company being wound up. The amount the investor would receive is the nominal value of the shares (ie, £1,000), provided there are sufficient funds.

5.1.4 Other Types of Shares

Ordinary shares may also be referred to as 'partly paid' or 'contributing shares'. This means that only part of their nominal value has been paid up.

Example

If a new company is established with an initial capital of £100, this capital may be made up of 100 ordinary £1 shares. If the shareholders to whom these shares are allocated have paid £1 per share in full, then the shares are termed 'fully paid'.

Alternatively, the shareholders may only contribute half of the initial capital, say £50 in total, which would require a payment of 50p (£0.50) per share; that is, one half of the amount due. The shares would then be termed 'partly paid', and the shareholder has an obligation to pay the remaining amount when called upon to do so by the company.

5.1.5 American and Global Depositary Receipts (ADRs and GDRs)

A depositary receipt (DR) is a negotiable instrument representing an ownership interest in securities of a foreign issuer, typically trading outside its home market. Depositary receipts provide a cost-effective and simple way of investing in overseas companies without the higher costs that are normally associated with owning foreign shares.

Two common types that are encountered are:

- American depositary receipts (ADRs), and
- global depositary receipts (GDRs).

ADRs and GDRs are usually US dollar-denominated and issued by a depositary bank. This depositary bank (or, at times, its local custodian) is registered as a shareholder in the company's share register. The depositary bank, as a registered shareholder, has full shareholder rights and exercises them on behalf of the holders of the DRs (so it votes according to their instructions, and receives and pays them dividends or newly-issued shares). The holder of the DRs (also being the beneficial owner of the underlying shares) may cancel the DRs at any time and become directly the registered shareholder of the underlying shares.

ADRs are listed and traded on the New York Stock Exchange (NYSE) and **Nasdaq Inc**. GDRs mainly trade on the London Stock Exchange (LSE).

In certain circumstances, the custodian bank may issue depositary receipts before the actual deposit of the underlying shares. This is called a pre-release of the DR, and the DR may trade in this pre-released form. A pre-release is closed out, as soon as the underlying shares are delivered to the depositary bank or its custodian.

5.1.6 Warrants

Warrants are negotiable securities issued by companies which confer a right on the holder to either buy (call) or sell (put) a certain number of the company's ordinary shares at a preset price on or before a predetermined date (regardless of the current market price of the shares). They are traded on the stock exchange.

When a call warrant is exercised, this results in the company issuing additional equity shares. In contrast, when a put warrant is exercised, the holder has the right to sell a specified number of underlying shares to the issuer.

Thus, call warrants are similar to **call options**, although there are key differences between them:

	Warrants	Call Options
Issuer	The company whose stock underlies the warrant	Stock exchanges or options exchanges
Type of contract	Few standardised features (ie, non-standardised)	Standardised (eg, expiration periods, number of shares per contract)
Dependency	Typically issued together with other instruments, such as bonds	Issued independently from other instruments, or as a separate product
Terms and conditions	Set by the issuing company	Set by the exchange
Traded	Traded on the stock exchange	Exchange-traded or over-the-counter
Tenure	Long-dated (up to 15 years)	Short-dated (up to one year)
Exercise	If exercised, the company issues new shares	If exercised, existing shares of the company change hands
Dilution	Warrants cause dilution as new shares are issued when exercised	Does not involve issuing new shares, so no dilution when exercised

In contrast, a covered warrant is a securitised derivative, issued by someone other than the company whose shares it relates to. It gets its name from the fact that, when it is issued, the issuer will usually buy or sell the underlying asset in the market (ie, they are covered if they should need to deliver the underlying shares and are not exposed to the risk of having to buy or sell them in the market at a much higher price than might otherwise have been the case).

Covered warrants are issued by a number of leading investment banks and can be based on individual stocks, indices, currencies or commodities. They can be either leveraged, as with individual stock options, or unleveraged, as with commodities.

5.2 Share Ownership

Learning Objective

3.5.2 Know the benefits of holding shares: dividends; subscription rights; voting rights

5.2.1 Benefits of Share Ownership

A major reason that investors might prefer equities to bonds is the dual potential benefit that can arise from owning shares, namely dividends, plus the prospect of capital growth. The combination of both is usually referred to as total return, reflecting the fact that both have an important part to play in the return that investors earn for providing the risk capital for companies. However, such capital growth and dividends are dependent on earnings growth by the company and the state of the stock market.

Investors often face a trade-off between seeking capital growth and seeking an income. Companies that reinvest most of their earnings into expanding their operations and generating future growth may offer lower dividends, as they prioritise reinvestment for future expansion and better growth prospects. On the other hand, companies that distribute a significant portion of their earnings as dividends may in some cases offer lower growth potential, as they may have less capital available for reinvestment, or no profitable investment opportunities to invest those earnings. In essence, investors typically cannot have high growth and high income simultaneously, and their investment decisions often reflect their preferences for one over the other.

Another way companies pass their earnings to shareholders is by means of share buybacks: a company uses its earnings to buy back some of its publicly-held shares, thereby reducing the number of these shares, and pushing up their share price, hence, creating gains for its shareholder.

5.2.2 Dividends

In many countries, companies strive to pay steadily growing dividends, where possible. A fall in dividend payments can trigger a very negative reaction among shareholders. Some companies have historically retained their earnings, thereby increasing the absolute value of the share prices, compared to those companies who have historically paid the majority of earnings/profits in the form of dividends.

Where a company experiences falling profits, yet either maintains their dividends or increases them, dividends are not fully covered by the earnings made. This would be described as an uncovered or a naked dividend, because the current year's profits were insufficient to fully cover the dividend. Companies occasionally do this, but it is not possible for them to maintain this long term.

Companies pay dividends out of their profits, technically termed their distributable reserves. These are the post-tax profits made over the life of a company, in excess of dividends paid.

Example

ABC Company was formed in 2000. Over the company's life, it has made ¥200 million in profits and paid dividends of ¥130 million. Distributable reserves at the beginning of the year are, therefore, ¥70 million (ie, ¥200 million – ¥130 million).

This year, the company makes post-tax profits of ¥30 million and decides to pay a dividend of ¥10 million. At the end of the year, distributable reserves are:

	¥m
Opening balance	70
Profit after tax for year	30
Total	100
Dividend	(10)
Closing balance	90

Note that, despite only making ¥30 million in the current year, it would be perfectly legal for the company to pay dividends of more than ¥30 million as they are paid out of distributable reserves; that is, the previous year's profits. This would then be termed an uncovered dividend, even though the company has plenty of retained earnings. A company's accounts provide details of retained earnings, as well as other pertinent financial information.

Potential shareholders seeking an income should compare the dividend paid on a company's shares – via the **dividend yield** – with alternative investments, such as other shares, bonds and bank deposits.

Example

ABC plc has 20 million ordinary shares, each trading at 25 yuan. It pays out a total of 10 million yuan in dividends. Its dividend yield is calculated by expressing the dividend as a percentage of the total value of the company's shares (the **market capitalisation**):

Dividend yield (%) = Dividend / Market capitalisation

So, the dividend yield is:

$$\frac{\text{Dividend}}{\text{Market Capitalisation}} \times 100 = \frac{\text{10 million}}{\text{200 million shares} \times 2} = \frac{1}{50} \times 100 = 0.02 = 2\%$$

Since ABC plc paid 10 million yuan to shareholders of 20 million shares, the dividend yield can also be calculated on a per-share basis.

The dividend per share is 10 million yuan/20 million shares; ie, 0.5 yuan. So, 0.5/25 (the share price) is again 2%.

Some companies have a higher-than-average dividend yield, while others have relatively low dividends. Notably, there is no obvious relationship between the dividend yield and the perception of the company in the marketplace.

An undeservedly high dividend yield could lead to the company being regarded as insecure, resulting in a lower share price, and the current dividend could be severely reduced in the future, thereby normalising the dividend yield.

Alternatively, a high dividend yield could be indicative of strong cash flows and/or low capital expenditure. Companies operating in defensive sectors also often make higher distributions, eg, utilities and healthcare companies; these companies are generally referred to as 'bond proxies', due to their bond-like characteristics of providing relatively lower-risk and higher levels of income.

A lower dividend yield might indicate that the company is perceived as stable and secure. Additionally, some companies may invest their earnings in growth opportunities, rather than distributing them as dividends. Companies operating in growth-oriented sectors (eg, technology or biotech) tend to allocate more funds towards research and development rather than dividend payments, as they aim to fuel innovation and expansion.

An ordinary shareholder has no guarantee of any dividend at all, nor is there a specific amount that can be relied upon from companies which have historically paid dividends. Even dividends from large and established companies can be reduced or eliminated – for example, as observed in 2020 during the onset of the COVID-19 pandemic.

5.2.3 Right to Subscribe for New Shares

If a company were able to issue shares to a third party without first offering them to existing shareholders, then the value of the existing shareholders' investment could be negatively impacted. As a result, company law in many countries mandates that companies either offer new shares to existing shareholders first (pre-emption rights) or seek their approval before issuing shares to third parties (waiver of pre-emption rights). In this way, governments seek to ensure some form of investor protection.

This is best explained by looking at an example.

Example

An investor currently holds 20,000 ordinary shares of the 100,000 issued shares in ABC Company. The investor owns 20% of ABC Company.

If the company planned to increase the number of issued shares, by allowing existing investors to subscribe for 50,000 new shares, then A would be offered 20% of the new shares, ie, 10,000. This would enable the investor to retain their 20% ownership of the enlarged company.

In summary:

	Before the issue	New issue	After the issue	Percentage ownership
Investor	20,000	10,000	30,000	20%
Others	80,000	40,000	120,000	80%
Total	100,000	50,000	150,000	100%

5.2.4 Right to Vote

Shareholders have the right to vote on matters presented at company meetings, including proposed dividends and other matters like the appointment or reappointment of directors.

Typically, the votes are allocated on the basis of one share = one vote. Votes are cast in one of two ways:

- The individual shareholder can attend the company meeting and vote.
- The individual shareholder can appoint someone else to vote on their behalf, commonly referred to as voting by **proxy** (or proxy voting).

However, this principle is not the rule worldwide, and multiple forms of voting differentiation exist, including the following:

- **Restricted or non-existing voting rights** – some shareholders have limited influence, thus allowing other shareholders to control the company while only holding a smaller proportion of the shares. For example, Alphabet (the holding company for Google) has different classes of shares that allow its founders to control the direction of the company without owning a majority of the shares in the company. Approaches such as this have often been met with a negative response from investors, as the demands for greater environmental and social governance accelerate.
- **Additional voting rights** (eg, 10 votes per share) **or enhanced voting rights** – for example, some shares (also called loyalty shares) have time-phased voting rights, whereby shareholders are given additional voting rights if they have held the shares for a given period of time.

5.3 Equity Markets

Financial markets are best described by their functions. The main functions include the following:

- Raise capital for companies. This function is performed by stock exchanges.
- Facilitate the transformation of funds by channelling short-term savings into longer-term business investments.
- Bring buyers and sellers together in highly organised marketplaces to reduce search and transaction costs and facilitate price discovery so that securities and other assets can be valued objectively. This function is performed by stock and derivatives **exchanges**, and other marketplaces.
- Allocate capital efficiently from low-growth to high-growth areas.
- Transfer risk from risk-averse to risk-seeking investors. This function is performed by the derivatives markets, but equally well by the insurance market which underwrites the risk from a large number of insurance policies. It is not a function of stock markets or stock exchanges, though.

- Provide borrowing and lending facilities to match surplus funds with investment opportunities. This function is performed by banks and stock exchanges.

A stock exchange is an organised marketplace for issuing and trading securities by members of that exchange. Each exchange has its own rules and regulations for companies seeking a **listing**, and continuing obligations for those already listed. All stock exchanges provide both a primary and a **secondary market**.

Primary markets exist to raise capital and enable surplus funds to be matched with investment opportunities, while secondary markets allow the primary market to function efficiently by facilitating a two-way trade in issued securities for buyers and sellers.

Secondary markets, by injecting liquidity into what would otherwise be deemed illiquid long-term investments, also reduce the cost of issuing securities in the primary (or new issue) market. Very few people would invest if there was no market through which to sell their investments.

5.3.1 Order-Driven and Quote-Driven Markets

Learning Objective

3.5.3 Know the main characteristics of order-driven markets and quote-driven markets

Secondary markets, as stated above, are those that permit the trading of securities that have already been issued. A trading venue or execution venue refers to a stock exchange or an alternative trading system that brings together buyers and sellers of securities. This trading is conducted through trading systems broadly categorised as either one of the following: **quote-driven** or order-driven.

Key Features of Order-Driven Markets

An order-driven market uses either an electronic order book, such as the LSE SETS, or an auction process, such as that on the NYSE floor, to match buyers with sellers. In both cases, buyers and sellers are matched in strict chronological order by price and the quantity of shares being traded and do not require **market makers**.

Most stock exchanges operate order-driven systems, and how they operate can be seen by looking at the SETS system as an example.

Example – Order Driven System

In this system, **member firms** (investment banks and brokers) input orders via computer terminals. These orders may be for the member firms themselves, or for their clients. Very simply, the way the system operates is that these orders will be added to the 'buy queue' or the 'sell queue', or executed immediately. Investors who add their order to the relevant queue are prepared to hold out for the price they want. Those seeking immediate execution will trade against the queue of buyers (if they are selling) or against the sellers' queue (if they are buying).

An example of how the order book operates is shown below.

Example – Order Book

For a liquid stock, such as blue-chip equities, there will be a 'deep' order book – the term 'deep' implies that there are lots of orders waiting to be dealt on either side. The top of the queues might look like

Buy Queue		Sell Queue	
We will buy for at most		We will sell for at least	
7,000 shares	£1.24	3,500 shares	£1.25
5,150 shares	£1.23	1,984 shares (2)	£1.26
19,250 shares (1)	£1.22	75,397 shares (2)	£1.26
44,000 shares (1)	£1.22	17,300 shares	£1.27

Queue priority is given on the basis of price and then time. So, for the equally priced orders noted(1), the order to buy 19,250 shares must have been placed before the 44,000 order – hence its position higher up the queue. Similarly, for the orders noted(2), the order to sell 1,984 shares must have been input before the order to sell 75,397 shares.

The key features of order-driven markets are as follows:

- Buyers and sellers will each use a broker who will act on their behalf as agent.
- The broker's role is to find a matching buyer for his client's shares or vice versa, and to obtain best execution for the client.
- The broker will charge **commission** for arranging the deal.
- The trade takes place on the floor of an exchange or via a computerised trading system.
- The price for the trade will be governed by demand and supply and so can be affected by large orders which can move the price, although computerised trading systems can hide part of a large order and allow it to be placed in smaller amounts.

To operate effectively, an order-driven market needs good liquidity, otherwise there will be problems with filling orders and pricing.

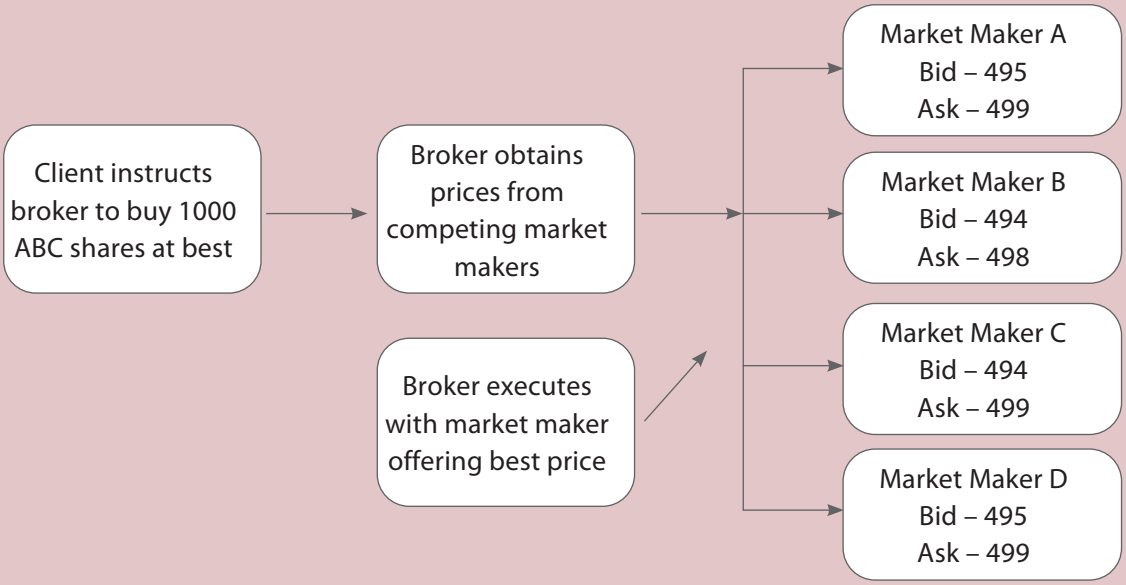
Quote-Driven Systems

By contrast, quote-driven trading systems employ market makers to provide continuous two-way, or bid and offer (buy and sell) prices, during the trading day regardless of market conditions. Market makers make a profit, or turn a profit, via this price spread.

The diagram below shows how an instruction to buy shares would be traded.

Example – Quote-Driven Trade

The client instructs their broker to buy 1,000 ABC shares at best – in other words, at the lowest price available. As the client wishes to buy, the broker will look to identify which market maker can fulfil the order to buy at the lowest price. The broker approaches market makers and asks for a price and in return they quote bid and ask prices (or bid and **offer prices**) to the broker.



The higher of the two quoted prices is the offer and is the price at which the market maker will sell shares; the lower price is the **bid price** and is the price that they will buy shares at. The client wishes to buy shares, so the broker will look to identify which market maker has the lowest offer price which in this case is market maker B. The broker will therefore agree to buy 1,000 ABC shares at 498 and the market maker agrees to sell the shares at that price.

The key features of a quote-driven system are:

- Liquidity is provided by a market maker.
- The market maker is required to buy and sell securities under all market conditions (and protects themselves during times of volatility by quoting a wider spread than in normal trading times).
- Market makers quote a price for buying and for selling and make their profits through the difference at which they buy and sell.
- Buyers and sellers will use a broker, as with order-driven markets, who will act as their agent. The broker will execute the trade with the market maker that is offering the best price. The broker will charge the client a commission for executing the trade.

Many practitioners argue that quote-driven systems provide liquidity to the market when trading would otherwise dry up. The **Nasdaq Inc** is an example of a quote-driven equity trading system.

5.3.2 Principal and Agent Trading

Learning Objective

3.5.4 Know the differences between principal trading and agency trading

Brokers receive orders to buy and sell equities on behalf of their clients and find matches for the trades that their clients want to make. When a client wishes to place an order, the broker firm that they deal with to execute the trade may act on an agency or principal basis:

- When a firm acts as agent, the firm arranges deals for others and makes money by charging a commission on the deal. This agency's role is commonly described as acting as a broker.
- When a firm acts as principal, then when the client places an order with it to sell shares, the firm will execute this order against its own trading book. In doing so, the firm will ensure that the client receives the best execution – eg, a price at least equal to, if not better than, that currently offered in the market. However, the firm's ability to do this will depend on the size of the order and liquidity.

What is Best Execution?

As an example, regulations in the European Economic Area (EEA) state that firms must take all sufficient steps to obtain, when executing orders, the best possible result for their clients, taking into account the execution factors. These factors are price, costs, speed, likelihood of execution and settlement, size, nature or any other consideration relevant to the execution of an order.

A broker operating on both agency and dealer basis has dual capacity, allowing it to act as either principal or agent in transactions. Such brokers are commonly known as dealers or **broker-dealers**. This versatile role entails fulfilling client orders to buy and sell shares using holdings from its trading book, with the aim of generating profits from the price differentials. They are member firms of stock exchanges that have chosen to trade as a principal.

5.3.3 On-Exchange and Over-the-Counter (OTC) Trading

Learning Objective

3.5.5 Know the implication of trading: on-exchange; over-the-counter (OTC)

Although many trades take place on a stock exchange, not all do so, as there are times when the size of the order or the type of instrument means that it might instead be negotiated separately between two market counterparties. On-exchange transactions are conducted through stock exchanges such as the LSE or the NYSE. Stock exchanges supervise the market to ensure that they operate efficiently and fairly and provides a safe business environment for customers. Obligations such as best execution require members to deal at the best available price, and they must consistently act in the best interests of their customers.

Off-exchange transactions, or OTC trading, occur outside the confines of a stock exchange, offering greater flexibility. This is known as over-the-counter (OTC) trading. Bonds are often traded on the OTC market, as the size of the order and the relative lack of liquidity mean that the market can operate more effectively by seeking out a counterparty to deal with.

6. Derivatives

A **derivative** is a financial instrument whose price is based on an underlying asset, whether a financial asset or **commodity** – examples include bonds, shares, stock market indices and interest rates; for commodities they include oil, silver or wheat. Futures and options are commonly used derivative instruments.

Derivatives are used for the following purposes:

- **Hedging** – this is a technique employed by portfolio managers to reduce the impact of adverse price movements, by either selling sufficient futures contracts (short) or buying (long) relevant derivative instruments to offset the position they hold.
- **Speculation** – since only initial margin (not the full notional value of the contract) is payable by counterparties at the point of opening their respective positions, futures provide an ideal means by which to speculate on both rising and falling asset prices in a range of markets.
- **Arbitrage** – this is the process of deriving a risk-free profit from simultaneously buying and selling the same asset in two different markets, where a price difference between the two exists. If the price of a derivative and its underlying asset are mismatched, then the portfolio manager may be able to profit from this pricing anomaly.

Derivatives can also be used for the following:

- **Asset allocation changes** – for example, if a portfolio manager anticipates that interest rates will rise in the future, then they can use interest rate futures or options to adjust the portfolio's duration and exposure to interest rate risk.
- **Anticipating future cash flows** – for example, if a large cash flow is expected to be received on a known future date, then derivatives can be used to invest in line with the desired asset allocation, without the investor missing out on potential market opportunities or being forced to hold excess cash in the interim.

Derivatives can then be used to protect investments from potential losses or in an attempt to make excess profits. Therefore, the risk to which investors are exposed depends on their chosen strategy.

6.1 Futures

Learning Objective

3.6.1 Know the following characteristics of futures: definition; key features; terminology

6.1.1 Definition of a Future

A futures contract is a legally binding agreement between two parties: a buyer and a seller.

- The buyer agrees to pay a prespecified amount for the delivery of a particular quantity of an asset at a future date.
- The seller agrees to deliver the asset at a future date in exchange for the prespecified amount of money based on the agreed price.

Example

A buyer might agree with a seller to pay $56 per barrel for 1,000 barrels of Brent crude oil in three months' time.

The buyer might be an electricity-generating company wanting to fix the price it will have to pay for the oil for use in its oil-fired power stations, and the seller might be an oil company wanting to fix the sales price of some of its future oil production.

6.1.2 Key Features

A futures contract has two distinct features:

- It is **exchange-traded** – for example, on a derivatives exchange such as ICE Futures Europe.
- It is **dealt on standardised terms** – the exchange specifies the quality of the underlying asset, the quantity underlying each contract, the future date and the delivery location – only the price is open to negotiation.

In the above example, the oil quality will be based on the oil field from which it originates (eg, Brent crude, from the Brent oil field in the North Sea), the quantity is 1,000 barrels, the date is three months ahead and the delivery location might be the port of Rotterdam.

Additionally, the pricing of futures contracts can be influenced by market conditions, leading to concepts such as the following:

- **Contango** – this occurs when the futures price of a commodity is higher than the expected future spot price. Often, this arises when there are costs associated with carrying the commodity (eg, storage and insurance). For example, if Brent crude is trading at $80 per barrel for immediate delivery, but $85 for delivery in three months, then the market is in contango.
- **Backwardation** – this occurs when the futures price is lower than the expected future spot price (eg, there is a high demand for the commodity in the short term or when supply is constrained). For example, if the spot price of Brent crude is $80 per barrel, but the futures price for delivery in three months is $75, then the market is in backwardation.

6.1.3 Futures Terminology

Futures markets have specialised terminology that is important to understand.

- **Long** – the alternative way to describe the buyer of the future. The long is committed to buying the underlying asset at the pre-agreed price on the specified future date.
- **Short** – the alternative way to describe the seller of the future. The short is committed to delivering the underlying asset in exchange for the pre-agreed price on the specified future date.
- **Open** – the initial trade. A market participant opens a trade when they first enter into a future. They could be buying a future (**opening** a **long position**) or selling a future (opening a **short position**).
- **Underlying** – the underlying asset drives the value of the future and is usually referred to as the underlying or cash asset.
- **Basis** – quantifies the difference between the cash price of the underlying asset and the futures price.
- **Delivery date** – the date on which the agreed transaction takes place and so represents the end of the future's life.
- **Close** – the buyer of a future can either hold the future to expiry and take delivery of the underlying asset, or sell the future before the expiry date. The latter is known as **closing out** the position. An investor who has bought a future would have a long position and to close out would sell the future; an investor with an open short position would do the reverse and buy the future to close out. Most futures that are opened do not end up being delivered; they are closed out instead. Most futures that are opened do not end up being delivered; they are closed out instead.

6.2 Options

Learning Objective

3.6.2 Know the following characteristics of options: definition; types (calls and puts); terminology

6.2.1 Definition of an Option

An option gives the buyer the right, but not the obligation, to buy or sell a specified quantity of an underlying asset at a pre-agreed **exercise price** (also known as the **strike price)**, on or before a prespecified future date, or between two specified dates. The seller, in exchange for the payment of a premium, grants the option to the buyer.

The term 'premium' is most commonly used in options; it is the cost to the buyer (holder) of the option and the fee paid to the seller (writer) of the option. It is agreed on the exchange between the contracting partners, and will reflect the prevailing price of the underlying asset and other factors such as interest rates and the time remaining until the exercise date. However, it can sometimes be used more loosely with other derivatives contracts, such as futures. The premium is covered in more detail in section 6.2.2 below.

For exchange-traded contracts, both buyers and sellers contract through the exchange and its clearing house rather than with each other.

6.2.2 Types of Option

There are two types of options:

- A call option gives the buyer the right, but not the obligation, to buy the asset at the exercise price. The seller must deliver if the buyer exercises the option.
- A **put option** gives the buyer the right, but not the obligation, to sell the underlying asset at the exercise price. The seller must take delivery and pay the exercise price if the buyer exercises the option.

The buyers of options are the owners of those options. They are also referred to as **holders**. The sellers of options are referred to as the **writers** of those options. Their sale is also referred to as 'taking for the call' or 'taking for the put', depending on whether they receive a premium for selling a call option or a put option.

The exchange, via its clearing house, needs to be able to settle transactions if holders choose to exercise their rights to buy or sell. Since the exchange does not want to be a buyer or seller of the underlying asset, it matches these transactions with deals placed by the option writers who have agreed to deliver or receive the matching underlying if called upon to do so.

The **premium** is the money paid by the buyer to the exchange (and then by the exchange to the writer) at the start of the options contract; it is not refundable. In practice, the premium will be affected by many factors, including:

- **The underlying asset price** – the higher the asset price, the more valuable are call options and the less valuable are put options.
- **The exercise price** – the higher the exercise price, the less valuable are call options and the more valuable are put options.
- **Time to maturity** – the longer the term of the option, the greater the chance of the option expiring **in-the-money**, therefore, the higher the **time value** and the higher the premium.
- **Volatility of the underlying asset price** – the more volatile the price of the underlying asset, the greater the chance of the option expiring in-the-money, therefore the higher the premium.

There are two other factors that will affect the option premium: the income yield on the underlying asset and short-term interest rates. It should be noted that their effects on option prices are fairly minor in relation to the other factors.

The following two simplified examples are intended to assist understanding of the way in which options contracts operate.

Example 1

You buy an XYZ plc 850 call for a premium of 20 when the share price is 800. On expiry, the share price is 880.

You would exercise the option and crystallise a net profit of 10, ie, (880 – 850) – 20.

Your return on investment is 10 ÷ 20 = 0.5 or 50%.

However, if you had bought the share for 800 and later sold it for 880, your return on investment would have been 80 ÷ 800 = 0.1 or 10%.

Example 2

Suppose shares in Jersey plc are trading at €3.24 and an investor buys a €3.50 call for three months. The investor, Frank, has the right to buy Jersey shares from the writer of the option at €3.50 if he chooses, at any stage over the next three months.

If Jersey shares are below €3.50 in three months' time, Frank will abandon the option.

If they rise, say to €6.00, then Frank will either:

- exercise the option: buy the shares at €3.50, and either keep them or sell them at €6.00, or
- sell the option before expiry, which would give him a profit of €2.50 (ie, €6.00 – €3.50).

If Frank paid a premium of €0.42, then what is Frank's maximum loss and what level does Jersey plc have to reach for Frank to make a profit?

The most that Frank can lose is €0.42, ie, the premium he has paid. If the Jersey plc shares rise above €3.92 (ie, €3.50 + €0.42, then he makes a profit. Alternatively, if the shares rose to only €3.51 then Frank would exercise his right to buy – it would be better for him to make a cent and cut his losses to €0.41, than to lose the whole €0.42.

6.2.3 Option Terminology

As with futures, options have their own terminology that it is important to understand:

- **Call option** – an option that gives the buyer the right, but not the obligation, to buy an underlying asset.
- **Put option** – an option that gives the buyer of the option the right, but not the obligation, to sell an underlying asset.
- **Holder** – the term used to describe the option buyer is the person who has bought it. It is also referred to as the long position.
- **Writer** – the term used to describe the seller of an option. It is also referred to as the short position.
- **Premium** – the term used to describe the price paid for an option.
- **Strike price** – the price at which the underlying asset may be bought or sold. Also referred to as the exercise price.
- **Expiry date** – the last day of the option's life.
- **At-the-money (ATM)** – an option whose strike price is the same as the current price of the underlying asset.
- **In-the-money (ITM)** – an option that can be exercised for a profit. For a call option, its strike price is below the current price of the underlying asset; and for a put option, its strike price is above the current price of the underlying asset.
- **Out-of-the-money (OTM)** – an option that, if exercised, would result in a loss. For a call option, its strike price is above the current price of the underlying asset; and for a put option, its strike price is below the current price of the underlying asset.
- **Break-even point** – the price at which the investor neither makes a profit nor incurs a loss. For a call option, the break-even point occurs when the underlying share price is equal to the strike price plus the premium paid; and for a put option, when the underlying share price is equal to the strike price less the premium paid.
- **European-style** – options that may be exercised on their expiry date only.

- **American-style** – options that may be exercised at any time during their lives up to and including the expiry date.
- **Asian-style option** – an option whose payoff depends on the average price of the underlying asset over a certain period of time (rather than the price at maturity, as per American and European options).
- **Bermudan-style option** – an option that can be exercised at a range of specific times (often on one day each month), up to and including the expiry date. It is thus considered midway between an American-style (anytime) and a European-style option (only at expiry).
- **Naked writer** – the seller of the option does not own the underlying asset.
- **Covered writer** – the seller of the option does own the underlying asset.

Let's take an American-style option as an example.

Example

If the underlying asset was a share in Example plc, the option was a call option enabling the buyer to buy the Example plc share at $6 and Example's shares were trading at $6.70, the option premium would be at least $0.70 – ie, the difference between the value of the shares and the exercise price at which the buyer can purchase those shares.

Call Options

The Example plc $6.00 call option detailed above is described as being in-the-money. In other words, the option is worth exercising because it is a call option, and the price of Example plc shares is greater than the strike price at which those shares can be purchased under the option.

In contrast, if there were a call option available that enabled the buyer to purchase Example plc shares at $6.75, and the shares were trading at $6.70, the option would be described as out-of-the-money. The option would not be worth exercising because the share price is less than the strike price at which the shares can be purchased under the call option.

The option may still be priced at a small premium. The premium represents the hope that the underlying share price rises over the period between purchasing the option and having the ability to exercise it by buying the shares.

There is also the possibility of a call option on Example plc shares that enables the buyer to purchase the shares at $6.70, exactly the same price as the underlying shares. This is described as an at-the-money option.

A call option is at break-even when the underlying share price is equal to the strike price plus the premium paid. The buyer can exercise the option to buy the shares at the strike price, and the total cost will equal the prevailing share price, thereby covering the amount paid as a premium, resulting in an overall break-even.

Put Options

For buyers with the right to sell (ie, put options), in-the-money and out-of-the-money options display the opposite characteristics to call options.

A put option that has an exercise price of greater than the underlying share price is described as in-the-money; for example, if an investor has a put option at $7 and the shares are trading at $6.70 then the option could be sold or exercised to take the profit of $0.30. A put option that has a strike price of less than the underlying share price is described as out-of-the-money. As with call options, a put option is at-the-money where the underlying share price and the strike price are the same.

A put option is at break-even when the underlying share price is equal to the strike price less the premium. The buyer can buy the shares at the prevailing share price, and put them with the seller for the exercise price generating the amount paid as a premium, resulting in an overall break-even.

7. Commodities

Learning Objective

3.7.1 Know the main features of commodity markets, and how the physical characteristics, supply and demand, and storage and transportation issues influence prices: agricultural; metals; energy

Commodities offer diversification opportunities because of their low correlation with traditional asset classes (equities and bonds); thus, commodities can play an important diversification role within a portfolio. Within the broader commodities asset class, there is scope for further diversification. Top-level categories include food, energy, precious metals and non-precious metals. Also, many subcategories are in competition with one another or have different demand and supply drivers. For example, in the energy sector, the gas market and the oil market are currently driven by very different dynamics – the gas market is heavily influenced by seasonal demand fluctuations and geopolitical tensions affecting supply routes, while the oil market is more impacted by OPEC production decisions and global economic growth trends.

Investors should focus on supply as well as demand conditions for commodities. Geopolitics remains a fundamental driver of commodity prices.

Additionally, environmental, social and governance (ESG) concerns are increasingly influencing commodity markets. As investors and companies prioritise sustainability and ethical practices, this is impacting both supply chains and consumer demand. Key materials used to make solar panels, wind turbines and batteries include copper, lithium and cobalt; however, a challenge here is that these materials must be mined, which can have environmental and social impacts (eg, water and air pollution, and mining under conditions that violate human rights). Further, the construction of factories and facilities to manufacture and assemble batteries can require cutting down hectares of forests, yet trees are integral components of ecosystems, contribute to biodiversity and provide habitats for wildlife. Therefore, balancing the demand for green technology with the need for responsible sourcing and environmental preservation is a complex but crucial task for the industry.

7.1 Agricultural Markets

Agricultural commodities cover a wide range of products and can be divided into several categories, as demonstrated in the table below.

Grouping	Products
Agricultural	Examples include corn, wheat, oats, rice, soybeans, soybean oil and wool (normally referred to as basic agricultural commodities)
Dairy	Butter, milk (dried, powdered and fresh), and whey
Livestock	Includes all animal-related products – eg, cattle, hogs and pork bellies
Softs	A label for a particular set of commodities, usually including cocoa, coffee, orange juice, rapeseed, spices, sugar, lumber and wood pulp

The price influences affecting all agricultural commodities can be summarised as supply and demand.

Supply refers to the amount of a commodity available in the market. It is influenced by factors such as the amount land used for production, weather conditions during the growing season, disease or insect activity, technological advancements, and the availability of transport and warehouse facilities.

Furthermore, the greater the number and diversity of sources for a particular soft or agricultural commodity, the more stable the supply will be. For example, if cocoa is grown in multiple locations, harmful weather in any one location will have less impact. This is also true in relation to disease, since an outbreak of a disease will have a reduced impact on prices if the disease is restricted to just one location.

Demand is driven by whether countries have a deficit of a particular commodity, rather than a surplus. Additionally, the wealth of the population, economic and industrial growth, consumer tastes and habits and tax incentives are important factors. The growth in demand for agricultural, soft and meat products over the past few decades has been partly attributed to the rise in living standards in India and China, which has caused a shift in the dietary habits of their populations.

As is the case for all commodities, the costs of proper storage/warehousing and transportation do influence their price. The issue of storage is less important at or just after a product has been harvested, since the cost is not as large as when a commodity has been stored for a longer period. The distances between producers and consumers also influence prices, particularly as the cost of transport has risen significantly recently.

What is unique to agricultural commodities pricing is that in most countries, the government is actively involved in the markets, as part of its support for local producers. The case of the EU and its Common Agricultural Policy is a prime example.

7.2 Base and Precious Metals

There are numerous metals produced worldwide and subsequently refined for use in a large variety of products and processes.

As with all other commodity prices, metal prices are influenced by supply and demand. The factors influencing supply include the availability of raw materials and the costs of extraction and production. A producer will measure the cost of extraction against a metal's price and, when the **marginal cost (MC)** of mining rises above a metal's current price, production will stop. This follows the basic economic principle that marginal cost must be less than the price in order to contribute to the other costs incurred, and potentially provide a profit. Such costs may be affected by political instability and environmental legislation.

Demand comes from underlying users of the commodity; for example, the growing demand for metals in rapidly industrialising economies (including China and India) and, in more recent years, the green transition to a more sustainable economy. It also originates from investors such as hedge funds, who might buy metal futures in anticipation of excess demand or incorporate commodities into specific funds. Producers use the market for hedging their production.

Traditionally, gold has been regarded by investors as a safe haven asset, particularly during times of crisis or economic turbulence. Investors often turn to gold as a store of value when faced with uncertainties such as geopolitical tensions, economic downturns or currency fluctuations. This heightened demand for gold during periods of instability typically leads to an increase in its price, reinforcing its reputation as a reliable hedge against market volatility.

Finally, metals used in packaging, for example, are influenced by the cost of alternatives such as glass and plastic and consumer/government concerns about sustainable resources and recycling.

The major metals can be subdivided into base metals and precious metals – base metals are often more abundant in nature and sometimes easier to mine, so their prices are generally lower than that for precious metals. The major metals and some of their uses are summarised in the following table:

Metal	Major uses
Base	
Copper	Electrics, electronics, building, electric vehicles, solar panels, wind turbines
Aluminium / aluminum	Aerospace, packaging, kitchen equipment, windows, car manufacture, buildings, canning, solar panels, wind turbines
Zinc	Galvanising, production of brass
Nickel	Production of stainless steel and other alloys
Lead	Batteries, buildings
Tin	Packaging, pewter
Lithium	Batteries and energy storage
Precious	
Gold	Jewellery, dentistry, computers, electronics, investments
Silver	Jewellery, dentistry, ornaments, electronics, photography

7.3 Energy Markets

The energy market, which is of huge importance, includes the market for oil (and other oil-based products like petroleum), natural gas and coal. Like the market for any other product, the price influences can be summarised as supply factors and demand factors. Supply is finite, and countries with surplus oil and gas reserves are able to export to those countries with insufficient oil and gas to meet their requirements. Prices could be raised by producers restricting supply, for example, by the activities of the major oil producers in the Organization of the Petroleum Exporting Countries (OPEC).

Demand for oil and gas is ultimately driven by levels of consumption, which in turn are driven by energy needs (for example, from manufacturing industry and transport). Prices can react sharply to political crises, particularly in major oil-producing regions of the world. For example, in 2022 following Russia's invasion of Ukraine, oil and gas prices surged for a period, as Russia is a large exporter of these resources; Europe was particularly affected, as it relied heavily on Russian gas imports. Furthermore, since the level of demand is directly determined by the consuming economies' growth, economic forecasts and economic data also have an impact on energy prices.

Oil includes both crude oil and various fractions produced as a result of the refining process, eg, naphtha, butanes, kerosene (jet fuel), petrol and heating/gas oil.

Crude oil is defined by three primary factors:

- field of origin, for example, Brent, West Texas Intermediate, Dubai
- density, ie, low density or 'light', high density or 'heavy', and
- sulphur content, ie, low sulphur (known as sweet) or high sulphur (known as sour).

Biofuel is any fuel that is derived from biomass (ie, plant or algae material, or animal waste). As they are derived from crops that can be harvested annually (or, in the case of algae, monthly), biofuels are a renewable energy source and theoretically unlimited. However, some biofuels actually contribute to global warming, so are doing more harm to the environment than good. Ethanol and methanol are two biofuel alternatives that have recently seen a significant rise in production and demand, given their reputation as a cleaner alternative to gasoline; produced from crops like sugar and corn, they have gained a significant market share in Brazil and to a lesser extent the US.

Coal is a fossil fuel that has lost some of its attractiveness recently, given its reputation as the most polluting source of energy. Widely abundant, it can be used in a wide range of energy-producing methods.

A petroleum refiner, like most manufacturers, is caught between two markets: the raw materials that they need to purchase and the finished products that they offer for sale. The prices of crude oil and its principal refined products, heating oil and unleaded gasoline, are often independently subject to variables of supply, demand, production, economics and environmental regulations. As such, refiners and non-integrated marketers can be at enormous risk when the price of crude oil rises while the prices of the finished products remain static, or even decline.

Such a situation can severely narrow the crack spread (also known as inter-commodity spreads) – in other words, the margin that a refiner realises when they procure crude oil, while simultaneously selling the heating oil and gasoline (being the end products of the process of refining the crude oil) into an

increasingly competitive market. The term 'crack spread' derives from the refining process, which cracks crude oil into its constituent products. Because refiners are on both sides of the market at once, their exposure to market risk can be greater than that incurred by companies who simply sell crude oil at the wellhead, or sell products to the wholesale and retail markets. Market participants typically use heating oil, gasoline, and crude oil futures to track crack spreads.

Other changes in market conditions and practices can have a subtler, but still significant, impact on prices. The controversy over environmental rules governing the formulation of gasoline and the sulphur content of distillate fuels has certainly been felt in the marketplace.

Because a refinery's output varies according to the configuration of the plant, its mix of crudes and its need to serve the seasonal product demands of the market, the energy futures market can provide the flexibility to hedge various ratios of crude and products.

When refiners are forced to shut down for repairs or seasonal turnaround, they often have to enter the crude oil and product markets to honour existing purchase and supply **contracts**. Unable to produce enough products to meet term supply obligations, the refiner must buy products at spot prices for resale to his term customers. Furthermore, lacking adequate storage space for incoming supplies of crude oil, the refiner must sell the excess on the spot market.

Other costs affecting the price of power include gas transportation, power transmission, plant operations and maintenance and fixed costs. In addition, when power demand is rising, the utility's ability to dispatch the next lowest cost generation in an economic manner can have a considerable impact on operating costs. For instance, oil might be less costly as a marginal generating fuel than natural gas, but the utility may still find it far easier and faster to bring natural gas-fired generators on line in time to meet rising demand.

In the cash market, the cost of gas transportation, electricity capacity, and transmission charges also must be factored in when determining the delivered price of electricity.

8. Digital Assets

Learning Objective

3.8.1 Know the background, key features and risks of digital assets

Digital assets are a relatively new and rapidly evolving area of finance and technology. Digital assets are known by various names, and an agreed definition for what constitutes a digital asset or cryptoasset has not been established. Broadly speaking, though, it is any form of virtual or digitised asset that is secured by cryptography and exists solely in electronic form.

Note that the terms 'digital asset' and 'cryptoasset' are often used interchangeably, but they can have slightly different meanings depending on the context. 'Digital asset' is a broad term that encompasses any asset that exists in digital form. In contrast, 'cryptoasset' specifically refers to a type of digital asset that utilises cryptographic techniques to secure transactions, control the creation of new units, and

verify the transfer of assets. This means that while all cryptoassets are digital assets, not all digital assets qualify as cryptoassets.

Cryptoassets are underpinned by blockchain technology which is a type of distributed ledger technology (DLT). DLT operates as a database or accounting system spread across a network, enabling participants to track ownership and transfer of cryptoassets. Blockchain uses cryptography to process and verify transactions on the ledger, to make it difficult to compromise the ledger's data and to provide independently verifiable proof of payment and ownership.

There are different types of digital assets, but some of the main types are cryptocurrencies (eg, Bitcoin), stablecoins, tokens and central bank digital currencies. Their key features are shown below.

Cryptocurrencies	• Assets that have been created digitally to serve as a store of value and which can be used as a medium of exchange for goods and services. • They are often referred to as virtual currencies to indicate they are not issued or guaranteed by central banks, so they are not fiat money.
Stablecoins	• A form of cryptocurrency. Unlike speculative cryptocurrencies, such as Bitcoin, their value is normally pegged to underlying assets to limit price fluctuations. The crash in the price of TerraUSD in the first half of 2022 showed, however, that stability cannot be taken for granted. • Customers buy stablecoins from exchanges, and some of their money is used as reserves to provide asset backing for the coins.
Tokens	• Digital versions of a cryptoasset. • There are two main types: security tokens and utility tokens. • Security tokens are designed as investment opportunities with characteristics similar to traditional financial instruments. • Utility tokens grant their holder future access to specific products or services.
Central Bank Digital Currencies (CBDCs)	• A form of digital currency issued by a central bank. • Proponents suggest this would offer the benefits attributed to stablecoins including lower costs and faster payment settlement. • Generally considered to be digital assets rather than cryptoassets. While CBDCs may utilise blockchain or DLTs for their operation, they are typically issued and regulated by central banks, which distinguishes them from decentralised cryptocurrencies.

The first cryptocurrency was introduced in 2009, in response to the global financial crisis. At that time, there was a lack of confidence in banks, which many felt were responsible for the crisis. Hence, Bitcoin emerged as an alternative decentralised currency, as a way of keeping money away from the bankers' control. Many new cryptocurrencies have been introduced since then, and today, thousands exist.

Cryptocurrencies have been highly volatile, meaning that their use in everyday life to pay for routine transactions has been limited. Instead, they have been bought as an asset that may appreciate in value even if the price is volatile.

Stablecoins were introduced in the early 2010s to overcome the volatility issues associated with speculative cryptocurrencies. It is important that advisers undertake due diligence on the reserves backing such coins, especially as sometimes there is a lack of clarity as to how the reserves are invested. Many hold Treasury securities and commercial paper (CP) as their reserves which, due to the sheer size of their holdings, could cause serious liquidity issues and potential contagion in credit markets if those holdings had to be sold rapidly.

Digital assets can be kept on computer records. One option is a digital wallet, which makes it easier to access those assets, and makes it faster to trade because the wallets can be quickly connected to exchanges or other services. Being online, however, makes digital wallets more susceptible to being hacked; therefore, some people prefer keep their digital assets in what is known as cold storage, on an electronic device that is not connected to the internet (the risk being that such device may be lost or destroyed). Another risk is losing or forgetting the private key that unlocks the digital wallet, which leads to accessing or retrieving the digital assets becoming virtually impossible.

The value of a coin can also be affected if it is discontinued, delisted or undergoes a significant technological change. Cryptocurrencies can be discontinued for many reasons including low volume and liquidity, and security breaches.

A further risk is that regulation of cryptoassets is in flux. While regulators worldwide have introduced new regulations on cryptoassets in recent years, in order to address emerging risks and safeguard financial stability, there is no common agreement on how the sector and assets should be regulated. This challenge is compounded by difficulties in classifying digital assets, the anonymous nature of some cryptoasset holdings, and their inherently cross-border characteristics.

9. Operations

The management of client assets such as bonds, equities and investment funds also requires efficient administrative operations to support it. This is known by various titles such as investment operations or securities processing. It entails a wide range of activities including holding assets in safekeeping, receiving and processing interest and dividend payments, applying corporate actions to client's holding and settling trades.

9.1 Methods of Holding Title

Learning Objective

3.9.1 Know the implications of holding: dematerialised or registered investments; Investments in bearer form

Trade settlement is a complex and increasingly important function that is required for markets to operate effectively. Trading activity, market liquidity and capital market growth depend on safe and efficient trading and settlement systems. Globalisation of markets has meant that customers want to trade in more than one market and in more sophisticated financial instruments. As settlement is the final phase of the trading process, it is often here that weaknesses in other areas of the process come to light. This has put pressure on investment firms to deliver improved quality, reduce settlement mistakes and invest heavily in automated systems.

9.1.1 Holding Title

Shares can be issued in either registered or bearer form.

Registered Form	• Holding shares in registered form involves the investor's name being recorded on the share register and, sometimes, the investor being issued with a share certificate to reflect their ownership. • Normal practice is for registered shares to be issued on a non-certificated basis, so that ownership is reflected in an electronic record; historically, the share certificate was a physical document.
Bearer	• The alternative to holding shares in registered form is to hold bearer shares. As the name suggests, the person who holds, or is the 'bearer' of, the share certificate is the owner. Ownership passes by transfer of the share certificate to the new owner. • This adds a degree of risk to holding shares, in that loss of the certificate might equal loss of the person's investment. As a result, actually holding bearer shares is relatively rare. • In addition, bearer shares are regarded unfavourably by the regulatory authorities owing to the opportunities that they offer for money laundering and tax evasion. Consequently, they are usually immobilised in depositories such as Euroclear, or by their local country registries.

In the vast majority of cases, a company is required to maintain a share register. This is simply a record of all current shareholders in that company, and how many shares they each hold. The share register is kept by the company registrar, who might be an employee of the company itself or a specialist firm of registrars. An electronic register is also kept so that trades can be settled electronically.

When a shareholder sells some, or all, of their shareholding, there must be a mechanism for updating the register to reflect the buyer and effect the change of ownership and for transferring the money to the seller. This is required in order to settle the transaction – accordingly, it is described as settlement.

Settlement represents the exchange of a security and its payment. In most developed financial markets, few participants actually hold physical certificates for the publicly-traded securities they own. Rather, ownership is tracked electronically through a book-entry system maintained by a central securities depositary (CSD). At the depositary, ownership transfer occurs on the system's records at settlement.

9.2 Trade Settlement

Learning Objective

3.9.2 Know aspects of trade settlement: delivery versus payment; the role of central counterparties

9.2.1 Clearing and Central Counterparties

Clearing is the process through which the obligations of the buyer and seller to a trade are defined and legally formalised. In simple terms, this procedure establishes what each of the counterparties expects to receive when the trade is settled. It also defines the obligations each must fulfil, in terms of delivering securities or funds, in order for the trade to settle successfully.

Specifically, the clearing process includes:

- recording key trade information so that counterparties can agree on the trade's terms
- formalising the legal obligation between counterparties
- matching and confirming trade details
- agreeing procedures for settling the transaction
- calculating settlement obligations and sending out settlement instructions to the brokers, custodians and CSD, and
- managing margin and making margin calls (margin relates to collateral paid to the clearing agent by counterparties to guarantee their positions against default up to settlement).

Trades may be cleared and settled directly between the trading counterparties – known as bilateral settlement. When trades are cleared bilaterally, each trading party bears a direct credit risk against each counterparty that it trades with. Hence, it will typically bear direct liability for any losses incurred through counterparty default.

The alternative is to clear trades using a central counterparty (CCP). A CCP interposes itself between the counterparties to a trade, becoming the buyer to every seller and the seller to every buyer. As a result, the buyer and seller interact with the CCP, so they remain anonymous to one another. This process, whereby the CCP becomes a party to the trade, is known as novation.

Regulators are increasingly keen to promote the use of CCPs across a wide range of financial products. While this does not eliminate the risk of institutions going into default, it does spread this risk across all participants, and is making these risks progressively easier to monitor and regulate. The risk controls

extended by a CCP effectively provide an early warning system to financial regulators of impending risks, and are an important tool in efforts to contain these risks within manageable limits.

9.2.2 Settlement Process

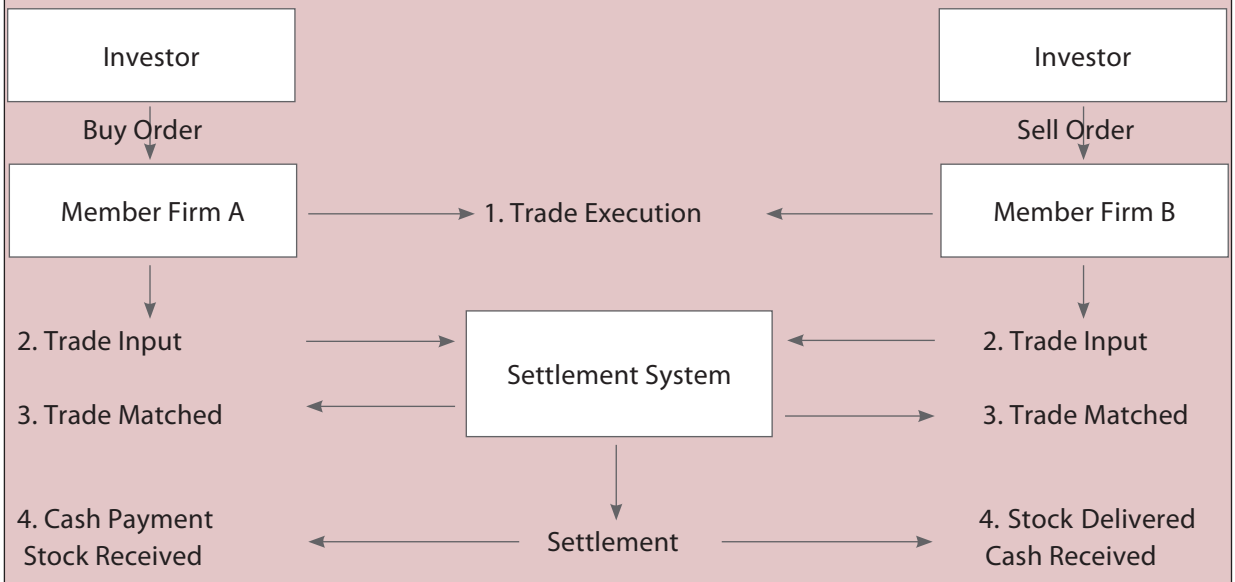
Settlement is the final phase of the trading process, and the generally accepted method is **delivery versus payment (DvP)**, which requires the simultaneous exchange of stock and cash.

Electronic systems are used to achieve this by a process known as book entry transfer, which involves amending electronic records of ownership rather than issuing new share certificates. Share certificates are instead either immobilised in a vault or, more usually, they are **dematerialised**, which means that paper share certificates are dispensed with altogether.

The exact process used for settlement will vary from country to country, but the following diagram illustrates the general principles of how a sale of shares between two counterparties on a recognised exchange is input, matched and settled.

Settlement Process

In this example, Firm A has executed an order to buy shares from a client with Firm B who has agreed to sell. The trade will take place on the stock market and after execution, both parties input details of the trade into the settlement system.



The settlement system will check that the instructions agree and, if so, will notify both parties that the trade is matched. On settlement day, the settlement system will check that the buyer has the necessary cash and that the seller has the shares. Providing that is the case, the system will transfer the shares to the buying broker and the cash to the selling broker. The brokers will in turn settle the transaction with their clients.

The date on which a trade settles is usually referred to as T+2 or a similar number. T refers to the trade date and T+2 identifies that the transaction will settle two business days after the trade date. For example, if a trade takes place on a Monday, then it will settle two business days later (ie, on Wednesday).

Many economies settle equity trades on a T+2 basis, although some countries have adopted or are considering shorter settlement cycles – for example, with effect from May 2024, US equities have settled T+1. The benefits of shorter settlement cycles include reduced counterparty credit risk and related costs, improved operational processes, and increased market liquidity. However, there is still some way to go before T+0 settlement is adopted, as securities markets would need higher levels of automated processing, as well as other investment infrastructure, to support these shorter cycles.

Bond trades often follow similar settlement conventions to equities, with T+2 being a common settlement period, although settlement periods vary depending on the market and the specific type of bond being traded. For example, some bond markets settle trades on a T+1 basis, while others may have longer settlement periods (eg, T+3 or even T+4).

Settlement periods for other types of investments (eg, mutual funds, options, futures foreign exchange and commodities) can vary from T+1 to T+4, if not longer, depending on market conventions, regulatory requirements and operational considerations.

9.3 Corporate Actions

Learning Objectives

3.9.3 Know the main mandatory and optional corporate actions: bonus/scrip; consolidation; final redemption; subdivision/stock splits; warrant exercise; rights issues; open offers

A corporate action is when a public company does something that affects its shareholders in an event that affects the securities (equity or debt) issued by the company. Investors need to understand the impact of these on their shareholding, as they can impact on share value.

Generally, corporate actions can be classified into three types: mandatory; mandatory with options; and voluntary (note that some countries, such as the US, classify them simply as voluntary or mandatory).

- A **mandatory corporate action** – is one mandated by the company, not requiring any intervention from the shareholders or bondholders themselves. The most obvious example of a mandatory corporate action is the payment of a dividend, since all shareholders automatically receive the dividend.
- A **mandatory corporate action with options –** is an action that has some sort of default option that will occur if the shareholder does not intervene. However, until the date at which the default option occurs, the individual shareholders are given the choice to go for another option. An example of a mandatory with options corporate action is a **rights issue**, which is considered below.
- A **voluntary corporate action** – is an action that requires the shareholder to make a decision. An example is a **takeover** bid – if the company is being bid for, each individual shareholder will need to choose whether to accept the offer or not.

Some countries, such as the US, classify them simply as voluntary or mandatory.

9.3.1 Securities Ratios

Before we look at various types of corporate action, it is necessary to know how the terms of a corporate action such as a rights issue or **bonus issue** are expressed – a securities ratio.

When a corporate action is announced, the terms of the event (as chosen by the company's board of directors or by shareholder vote) will specify what is to happen. This could be as simple as the amount of dividend that is to be paid per share. For other events, the terms will announce how many new shares the holder is entitled to receive for each existing share that they hold.

For example, a 5-for-2 bonus issue means that an investor receives five new shares for every two shares they hold in a company. In this scenario, an investor that owns 200 shares will end up with 200 + 500 = 700 shares in total. This is the standard approach used in European and Asian markets, and can be simply remembered by always expressing the terms as the investor will receive 'X new shares for each Y existing shares'.

The approach differs in the US. The first number in the securities ratio indicates the final holding after the event; the second number is the original number of shares held. Here, a 5-for-2 bonus means that an investor with 200 shares will end up with 500 shares.

When dealing with corporate actions in different jurisdictions, you will often have to clarify the convention being used to understand the terms of the issue.

9.3.2 Main Types of Corporate Action

There are more than 150 different types of corporate action. In this section, we will only consider some of the many types that are encountered.

- **Bonus issue** – also known as a scrip issue or a capitalisation issue. The company issues further shares of a security to existing holders (ie, to those shareholders who are listed on the share register) based on the holdings of each member on the record date. Companies primarily undertake bonus issues in order to attract investment – the issuance of bonus shares increases the number of shares in issue, thus reducing the price per share, which makes the shares more affordable for retail investors.
- **Consolidation (reverse split)** – the company decides to decrease the number of issued securities, which would result in a corresponding increase in the nominal value. Take a 1-for-4 consolidation of ordinary 25p shares as an example: this means that every 4 ordinary 25p shares would be consolidated into 1 ordinary £1 share.
- **Final redemption** – a final redemption involves the repayment in full of a debt security at the maturity date stated in the terms and conditions of an issue.
- **Subdivision (stock split)** – the company increases the number of issued securities, for example, by dividing every one share currently existing into four shares of a quarter of the old nominal amount.
- **Warrant exercise** – warrants give a holder the right to buy (call) or sell (put) a prespecified number of a company's ordinary shares at a preset price on or before a predetermined date.
- **Rights issue** – a company gives existing investors the right to subscribe for additional new shares at a discount on the market price at the time of announcement. The number of additional shares for which they can subscribe is in proportion to the investor's existing holding. If the investor does not exercise their rights, then the rights are sold by the company and any proceeds are distributed to those shareholders.

- **Placings** – a company may undertake a placing as part of an **initial public offering (IPO)** or to raise additional finance by placing new shares in the market rather than by making a rights issue. This requires the shareholders to pass a **special resolution** first to forgo their pre-emption rights.
- **Open offers** – an open offer is a method of raising new capital, similar to a rights issue. The offer invites shareholders to buy new shares at a price below the current market price; but unlike a rights issue, it cannot be sold. Thus, if the shareholder decides not to take up the entitlement, it lapses.

End of Chapter Questions

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

1. **Give a brief explanation of four money market instruments.**
   Answer reference: Section 1.2.1

2. **When will a spot FX trade settle?**
   Answer reference: Section 2

3. **What factor is used when calculating a forward exchange rate between two currencies?**
   Answer reference: Section 2

4. **How does the inclusion of a put provision in a bond affect the bondholder and the issuer?**
   Answer reference: Section 3.1

5. **Name four types of corporate bond.**
   Answer reference: Section 3.3.2

6. **A government bond has a 6% coupon and is currently priced at 110. What is its flat yield?**
   Answer reference: Section 3.4.1

7. **Give four advantages and two disadvantages of direct property investment.**
   Answer reference: Section 4.1

8. **What are REITs?**
   Answer reference: Section 4.2.1

9. **Why might an investor choose a preference share rather than ordinary shares?**
   Answer reference: Section 5.1.3

10. **What is the difference between order-driven and quote-driven trading systems?**
    Answer reference: Section 5.3.1

11. **How does an option differ from a future?**
    Answer reference: Sections 6.1.1 and 6.2.1

12. **An investor has bought a call option exercisable at 100 for a premium of 10. If the underlying share price is 98, is the option in-the-money, at-the-money, out-of-the-money or at break-even?**
    Answer reference: Section 6.2.3

13. **What is DvP and where is it used?**
    Answer reference: Section 9.2.2

Chapter Four

Collective Investments

1. **Investment Funds** 113

2. **Other Investment Vehicles** 128

This syllabus area will provide approximately 7 of the 100 examination questions

1. Investment Funds

Investors have a range of investments to choose from and can buy them directly or indirectly.

Direct investment involves an individual personally buying shares in a company, such as Apple, the IT company. Indirect investment involves an individual buying a stake, or unit, in a collective investment vehicle, like a mutual fund that invests in a variety of companies, including Apple.

Achieving a diversified portfolio through direct investments requires a significant amount of money, making indirect investment an attractive option for many investors.

There is a range of funds available that pool the resources of a large number of investors to provide access to a range of investments that would not be possible to invest in directly – either because of the underlying investments or monetary value needed to have a directly invested portfolio. These pooled funds are known as collective investment schemes (CISs), funds or collective investment vehicles, run by asset management firms, as opposed to private client investment managers running individual private client portfolios. The term 'collective investment scheme' is an internationally recognised one, but CISs are also known by other names in different countries.

- In the US, the term mutual fund is used.
- In continental Europe, the open-ended version is known as a *Société d'Investissement à Capital Variable* (SICAV), but there is a variety of other structures in use, some of them being neither trust nor corporate, but purely based on contractual arrangements.
- In the UK they take the legal form of unit trusts or **open-ended investment companies (OEICs)**. Some unregulated schemes are also established as limited partnerships.
- In addition, under the term investment funds, there is another type of unitised vehicle called an **investment trust** or an investment company. However, this is set up as a company, listed on a

stock exchange and traded in the same way as other shares. They are very similar to other CISs in terms of being invested in a range of different companies but are closed-ended rather than open-ended.

An investor is likely to come across a range of different types of investment fund, as many are now established in one country and then marketed internationally. Funds that are established in Europe and marketed internationally are often labelled as UCITS funds, meaning that they comply with EU rules; the UCITS branding is seen as a measure of quality that also makes them acceptable for sale in many countries in the Middle East and Asia.

The main centre for establishing funds that are to be marketed primarily in Europe is Luxembourg, where investment funds are often structured as SICAVs. Other popular centres for the establishment of investment funds that are marketed globally include the UK, Ireland and Jersey, where the legal structure is likely to be either an open-ended investment company or a unit trust.

1.1 Benefits of Collective Investment

Learning Objective

4.1.1 Know the benefits of collective investment

Collective investment schemes (CISs) pool the resources of a large number of investors with the aim of pursuing a common investment objective. This pooling of funds brings a number of benefits, including:

- **economies of scale**
- **diversification**
- access to **professional investment management**
- access to **geographical markets, asset classes** or **investment strategies** which might otherwise be inaccessible to the individual investor
- in many cases, the benefit of **regulatory oversight**
- in some cases, **tax deferral**, and
- **liquidity** – the ability to join and leave with relative ease.

The value of shares and most other investments can both fall and rise. Some might fall spectacularly, such as during the onset of the COVID-19 pandemic when oil and gas companies experienced significant declines due to lockdowns and reduced demand for fuel, while technology stocks rose as more people worked from home and relied on digital services and products. However, when an investor holds a diversified pool of asset classes and investments (ie, they are spread across different types of assets, sectors/industries and geographical regions, among other considerations), then the risk of one investment failing is mitigated to some extent. Usually in a directly invested portfolio an investor could have an average of between 3–5% weightings in the investments. This compares to a fund, where an average holding is a lot smaller at say 1.5%. Consequently, if both held a company that collapsed, it would be the directly invested portfolio that would have suffered the most. The chance of a startling outperformance is also diversified away, though.

However, diversification has its limits in reducing risk. The correlation between asset classes tends to increase during volatile times. For instance, in 2022, both bonds and equities fell simultaneously during a period of high inflation and rising interest rates, which, among other factors, caused a cost-of-living crisis. To monitor this over time, it is important to look at the drawdown ratio of a particular fund to see how well a fund manager performs in times of falling markets.

An investor needs a substantial amount of money before they can create a diversified portfolio of investments directly. For example, if an investor has only $3,000 to invest and wants to buy the shares of 30 different companies, each investment would be $100. This would result in a large percentage of the $3,000 being spent on commission, since there will be minimum commission rates of, say, $10 on each purchase. Alternatively, an investment of $3,000 might go into a fund with, say, 80 different investments, but, because the investment is being pooled with lots of other investors, the commission as a proportion of the fund is very small. The fund will, however, charge for managing the investment fund.

A fund might also be invested in shares from many different sectors and/or geographic regions; this achieves diversification from an industry perspective (thereby reducing the risk of investing in a number of shares whose performance is closely correlated).

Alternatively, it may invest in a variety of bonds – diversification can be achieved by investing in bonds with different credit ratings, maturities and durations, for example. Some collective investments put limited amounts of investment into bank deposits and even other investment funds. Today, many funds are offering investors the opportunity to invest in multi-asset class funds or other/alternative asset classes such as property, commodities and private equity. Sector-specific funds are also available, such as those focusing purely on infrastructure, technology and healthcare.

The other main rationale for investing collectively is to access the investing skills of a fund manager. Active fund managers (ie, those who make active decisions as to which securities or assets to invest, which can differ markedly from the benchmark index) follow their chosen markets closely and will carefully consider what to buy and whether to keep or sell their chosen investments. For those investors who do not have the skill, time or inclination to do this themselves, funds represent a sensible solution. However, fund managers' skills vary, and advisers need to be able to assess how well or otherwise an active fund manager has performed.

Along with a fund manager's skill, especially with regard to retail investors, funds allow investors to access securities and strategies that would not normally be available to retail investors directly, such as absolute return style investments, hedge funds and private equity investments.

While active funds provide access to the expertise of fund managers, passive funds (often in the form of ETFs) aim to track the performance of specific market indices, by investing in the constituents or a sample of the constituents in the chosen **index**. For investors seeking broad exposure to markets in a cost-effective and transparent manner, passive funds offer can an attractive option: they provide access to a diversified portfolio of assets, while typically charging lower fees compared to actively managed funds. However, passive funds are inherently exposed to market risk: when the overall market experiences a downturn, passive funds will follow markets down, potentially resulting in losses for investors.

Fund managers do not manage portfolios for nothing. They might charge investors fees to become involved in their fund (entry fees or initial charges), fees to leave the funds (exit charges) and annual management fees, among other costs. These fees are needed to cover the fund managers' salaries, technology, research, dealing charges, settlement and risk management systems, and to provide a profit. In some countries, the charges also cover the cost of commission paid to advisers for recommending the fund.

Usually, mutual fund shares can be sold without too much effect on their value. If there could be an adverse effect on the unit price, then fund managers can delay the sales. In extreme times, this is referred to as 'gated'. This means the fund is closed to any new sales/redemptions, until the fund manager can raise sufficient money to pay out to those wishing to sell their units and not disadvantage the remaining holders. It is important to watch out for any fees associated with selling, including back-end load (ie, a percentage of the value being sold). Unlike stocks, investment trusts and exchange-traded funds (ETFs), which trade any time during market hours, mutual funds transact only once per day after the fund's net asset value (NAV) is calculated, which can be at different times of the day.

1.2 Investment Funds

Learning Objective

4.1.2 Know the characteristics of types of investment products: authorised funds and unauthorised funds; open-ended funds; closed-ended investment companies; Undertakings for Collective Investment in Transferable Securities (UCITS) funds

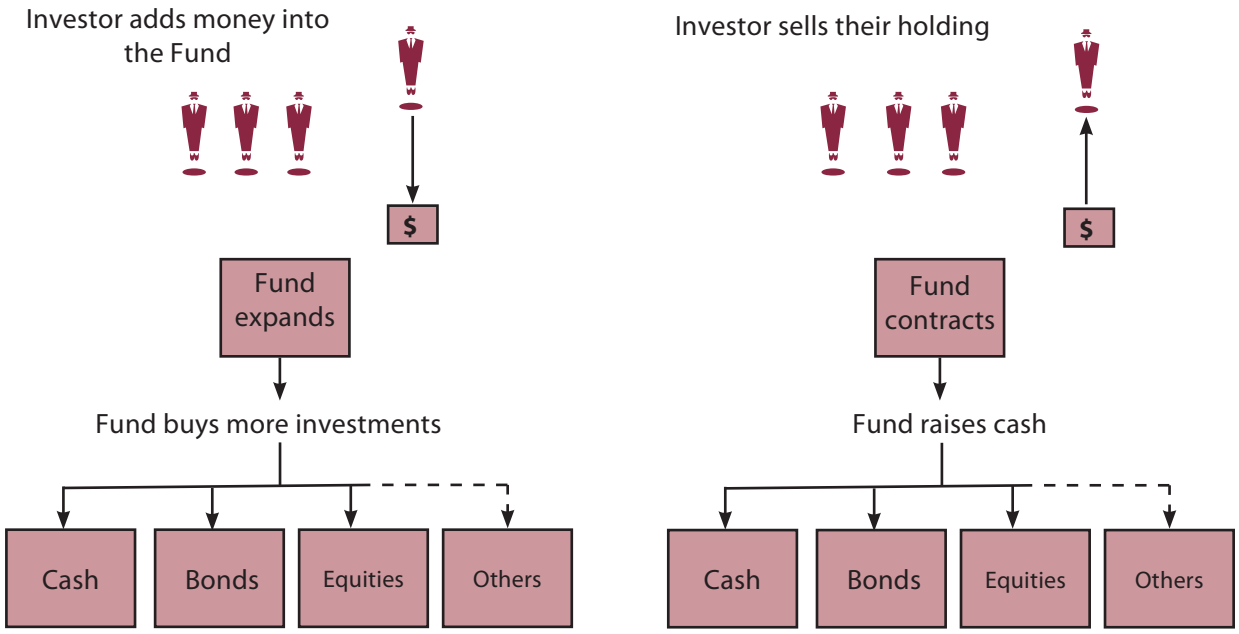
In most markets, some collective investment schemes are authorised, while others are unauthorised or unregulated funds. Typically, in order to sell a fund to investors, the fund group must seek **authorisation** from that country's regulator. The regulator's approach will then depend on whether the fund is to be distributed to retail investors or only to professional investors (see chapter 7, section 1.1 for further details on how clients are categorised).

Where a fund is to be sold to retail investors, the regulator will authorise only those schemes that are sufficiently diversified and which invest in a range of permitted assets. Authorised CISs can be freely marketed to retail investors.

CISs that have not been authorised by the regulator cannot be marketed to the general public. These unauthorised vehicles are perfectly legal, but their marketing must be carried out subject to certain rules and are often restricted to certain types of investor, such as institutional investors.

1.2.1 Open-Ended Funds

An open-ended fund is one that can create new units or shares to meet investor demand and cancel shares or units when investors sell, and so their capital base can expand or contract, hence the term 'open-ended', as the following diagram illustrates.



Unit trusts and OEICs are types of open-ended funds, as are mutual and UCITS funds.

Open-ended funds have the flexibility to issue and redeem shares at any time. Each investor holds a pro rata share of the underlying portfolio and so will have a share in any growth of the fund. The value of each share is in proportion to the total value of the underlying investment portfolio, known as the net asset value (NAV).

Net Asset Value (NAV)

An investment fund pools investor's subscriptions into a portfolio, which it then manages in accordance with its investment mandate. In the context of an investment fund, the NAV refers to the value of its underlying portfolio, plus the cash it holds, less liabilities such as expenses and applicable fees. The NAV, therefore, represents the approximate net market value of the fund. The NAV per share or per unit is the NAV divided by the number of shares or units in issue.

To explain this more fully: if investors wish to invest in an open-ended fund, they (or a financial advisor/wealth manager on their behalf) approach the fund directly and provide the money they wish to invest. The fund manager can create new shares/units in response to this demand, issuing new shares/units to the investor at a price based on the NAV. If investors decide to sell, they again approach the fund manager, who will redeem the shares/units and pay the investor the value of their shares, again based on the NAV.

Main Characteristics

- The investment portfolios of open-ended funds are typically managed by separate entities known as fund managers, who are registered with the relevant financial regulator – eg, the Financial Conduct Authority (FCA) in the UK, and the Securities Exchange Commission (SEC) in the US.
- Being open-ended, fund managers can create and sell new shares/units to accommodate new investors.

- Investors buy open-ended fund shares directly from the fund manager (rather than from other investors on a secondary market) through a distributor who has signed a distribution agreement with the fund management company, such as a bank or through a platform.
- The price that investors pay for open-ended fund shares/units is based on the fund's NAV (ie, the value of the underlying investment portfolio) plus any charges imposed by the fund.

Fees and Expenses

To cover the management and administration costs of running a fund, unit trusts levy various charges on investors. These charges may include the following:

- **Initial charges** – (also known as front-end loads or preliminary charges) – levied when the fund is purchased at NAV, expressed as a percentage of the amount invested. These charges are usually paid to the distributor of the fund (eg, a bank), not to the fund management company.
- **Exit charges** – (also known as the back-end loads, deferred sales charge or redemption fees) – may be incurred by investors when they sell their units back to the fund.
- **Annual management charges (AMC)** – levied on the accumulated value of the fund, usually expressed as a percentage of the funds under management and deducted periodically from the fund. The AMC aims to cover the running expenses of the fund.
- **Ongoing charges figure (OCF)** – also called the ongoing charges (OGC) – cover costs and expenses for the running of the fund such as dealing commissions, audit fees and custody fees. It is usually expressed as a percentage of the funds under management. Another way that these costs may be disclosed to investors is through the total expense ratio (TER) – the only material difference between the OCF and the TER is that the OCF excludes any performance charges that have been paid over the past year, while the TER includes them. Hence, the OCF gives the most accurate measure as to how much investors will pay to invest in a fund.
- **Performance-related fees** – reward the fund manager for positive returns or returns above a certain level. The logic is that this better aligns the interests of fund managers and their clients (ie, investors).
- **Other expenses** – funds may also contain a number of charges and expenses not included in management fees, and which are not included in the marketing and distribution expenses. These may include custodial expenses, legal expenses, accounting expenses, transfer agent expenses, and any other administrative expenses. They may also include charges for trading costs, bid-offer spreads, slippage costs and research costs.

Overall, charges vary from fund to fund, but the charging structure must be clearly detailed in the fund's prospectus.

Classes of Shares/Units

Many open-ended funds offer multiple share/unit classes, often denoted by letters or numbers, to cater to the varying needs of different investors. These classes can have different initial investment levels and fee structures, to accommodate the preferences of institutional or retail investors.

Note that the designation of letters or numbers can vary from one fund manager to another.

Distributions from Open-Ended Funds

Broadly, open-ended funds may be set up as either of the below, or often have both share/unit classes:

- **Income (or Inc)** – where all income produced by the underlying investments is paid out to the shareholder/unitholder on a regular basis.
- **Accumulation (or Acc)** – where income is instead reinvested within the fund.

1.2.2 US Open-Ended Funds

The most well-known type of US investment fund is a mutual fund. Legally, it is known as an 'open-ended company' under federal securities laws. A mutual fund is one of three main types of investment fund in the US; the others are considered in the section on closed-ended funds (see section 1.2.4).

Most mutual funds fall into one of three main categories:

- Money market funds.
- Bond funds, which are also called 'fixed-income' funds.
- Stock funds, which are also called 'equity' funds.

1.2.3 European Open-Ended Funds

In Europe, four main types of open-ended funds are commonly encountered: SICAVs, FCPs, unit trusts and OEICs. Many European funds are structured as UCITS funds, which we will consider first.

UCITS Funds

UCITS is an acronym for the **Undertakings for Collective Investment in Transferable Securities Directive** and refers to a series of European Union (EU) regulations that were originally designed to facilitate the promotion of funds to retail investors across the European Economic Area (EEA). A UCITS fund, therefore, complies with the requirements of these directives, no matter in which EU country it is established.

The directives have been issued with the intention of creating a framework for cross-border sales of investment funds throughout the EU. They allow an investment fund to be sold throughout the EU, subject to regulation by its home country regulator.

Since the first directive was issued in 1985, further directives have expanded the range of assets a fund can invest in, particularly by allowing managers to use derivatives more freely. Subsequent updates have also implemented stricter regulations on risk management, liquidity management and supervision within the investment framework.

While UCITS regulations are not directly applicable outside the EU, other jurisdictions (such as Switzerland and Hong Kong) recognise UCITS when funds are applying for registration to sell into those countries.

SICAVs and FCPs

As mentioned in section 1, Luxembourg is the main centre for funds that are to be distributed to investors across European borders and globally. The main US fund groups along with their European counterparts manage huge fund ranges from Luxembourg, which are then distributed and sold not just across Europe but in the Middle East and Asia as well.

The main type of open-ended fund that is encountered is a *société d'investissement à capital variable* (SICAV); in other words, the EU equivalent of the UK's open-ended investment company (OEIC). SICAV translates directly into '**investment company with variable capital (ICVC)**', which is another name for an OEIC. OEICs are explained below.

Another popular vehicle in continental Europe is fonds *commun de placement* (FCP). Like unit trusts, FCPs do not have a legal personality and, instead, their structure is based on a contract between the scheme manager and the investors, which provides for the funds to be managed on a pooled basis. As FCPs have no legal personality, they have to be administered by a management company, but otherwise the administration is very similar to that described above for SICAVs.

In summary, SICAVs and FCPs are both European open-ended funds, which share similarities but their key difference is that SICAVs are corporate entities with variable capital (like an OEIC), while FCPs are contractual funds without legal personality (like a unit trust).

Unit Trusts

A **unit trust** is an investment fund that is established as a trust, in which the trustee is the legal owner of the underlying assets and the unitholders are the beneficial owners. They are usually found in countries that operate a common law system such as the UK.

As with other types of open-ended investment funds, the trust can grow as more investors buy into the fund, or shrink as investors sell units back to the fund and they are either cancelled or reissued to new investors. As with SICAVs, investors deal directly with the fund when they wish to buy and sell.

The major differences between unit trusts and the open-ended funds that we have already looked at are the parties to the trust and how it is priced.

Main Parties to a Unit Trust	
Unit Trust Manager	• The role of the unit trust manager is to decide, within the rules of the trust and the various regulations, which investments are included within the unit trust. • This will include deciding what to buy and when to buy it, as well as what to sell and when to sell it. The unit trust manager may outsource this decision-making to a separate investment manager in some cases. • The manager also provides a market for the units by dealing with investors who want to buy or sell units. It also carries out the daily pricing of units, based on the NAV of the underlying constituents.

Main Parties to a Unit Trust	
Trustee	• Every unit trust must also appoint a trustee. These are organisations that the unitholders can trust with their assets, normally large banks or insurance companies. • The trustee is the legal owner of the assets in the trust, holding the assets for the benefit of the underlying unit holders. • The trustee also protects the interests of the investors by, among other things, monitoring the actions of the unit trust manager. • Whenever new units are created for the trust, they are created by the trustee.

Just as with other investment funds, the price that an investor pays to buy a unit trust or receives when they sell is based on the NAV of the underlying portfolio.

Unit trusts have both a bid and an offer price; hence, they are described as dual-priced.

Initial charges for buying the fund are included in the quoted offer price.

Open-Ended Investment Companies (OEICs)

An open-ended investment company (OEIC) is another form of investment fund found in Europe. They are a form of **investment company with variable capital (ICVC)** that is structured as a company with the investors holding shares. In Ireland, they are known as a variable capital company (VCC). OEICs have similar structures to SICAVs and, as with other types of open-ended fund, investors deal directly with the fund when they wish to buy and sell.

The key characteristics of OEICs are the parties that are involved and how they are priced.

Parties to an OEIC	• When an OEIC is set up, it is a requirement that an **authorised corporate director (ACD)** and an independent depositary are appointed.
	• The ACD is responsible for:
	  • The day-to-day management of the fund, including managing the investments, valuing and pricing the fund and dealing with investors. It may undertake these activities itself, or delegate them to specialist third parties.
	  • Maintaining the register of shareholders.
	• The depositary occupies a similar role to that of the trustee of a unit trust. They are the legal owner of the fund investments and the OEIC itself is the beneficial owner, not the shareholders. The depositary is responsible for:
	  • Holding the fund's investments.
	  • Managing the investments on behalf of the fund's shareholders.
	  • Overseeing the activities of the ACD.

Pricing	• An OEIC has the option to be either single-priced (ie, the price of the OEIC is based on the mid-market prices of the underlying assets) or dual-priced. Most OEICs operate single pricing. • Single pricing refers to the use of the mid-market prices of the underlying assets to produce a single price at which investors buy and sell. • Where a fund is single-priced, its underlying investments will be valued based on their mid-market value. • This method of pricing does not provide the ability to recoup dealing expenses and commissions within the price. Such charges are instead separately identified for each transaction. • It is important to note that the initial charge will be charged separately when comparing single pricing to **dual pricing**.

When looking at overall charges of a fund, especially for comparison purposes, it is important to look at the ongoing charge figure (OCF), as described in section 1.2.1, above.

Other Fund Structures

Fund of Funds

A **fund of funds (FoFs)** comprises a portfolio of retail or institutional CISs which seek to harness what is considered the best investment management talent available within a diversified portfolio. A fund of funds has one overall manager, and it invests in a portfolio of other existing investment funds. It is important to recognise, however, that a fund of funds can be either fettered or unfettered. Most fund of fund schemes are managed on an unfettered basis, in that the component funds are run by a number of managers external to the fund management group marketing the fund of funds. However, some are managed as a fettered product and are obliged to invest solely in funds run by the same management group as the fund.

Multi-Manager

By contrast, a **manager of managers (MoMs) fund** does not invest in other investment schemes. Instead, the fund arranges segregated mandates and appoints fund managers who they believe are the best in their sector to manage each area. Hence, one advantage of a MoM fund is the potential for enhanced performance through direct access to top-tier fund managers with specialised expertise that a FoF may not necessarily have the ability to select. One disadvantage is that the initial investment required is usually substantially higher than that required for a fund of funds or other CIS. Equally, it also takes time to change from an underperforming fund manager, as opposed to a fund of funds approach, where the fund itself is sold within a strategy.

1.2.4 Closed-Ended Investment Companies

A closed-ended investment company is another form of investment fund.

When they are first established, a set number of shares are issued to the investing public, and these are then traded on a stock market. Investors wanting to subsequently buy shares do so on the stock market from investors who are willing to sell. The capital of the fund is therefore fixed (that is, except when shares are issued for future investment opportunities of the fund), and does not expand or contract as per an open-ended fund. For this reason, they are referred to as closed-ended funds.

Closed-ended investment companies are found in many countries, primarily in Europe and North America.

Main Characteristics

- Closed-ended funds have a fixed number of shares, which are typically issued during an initial public offering (IPO). After this, the fund does not issue or redeem shares on demand.
- They are listed and traded on stock exchanges like individual stocks, thus allowing investors to buy and sell shares at market prices throughout the trading day.
- Unlike open-ended funds, closed-ended funds do not typically offer redemption of shares at the fund's NAV. Investors must sell their shares on the secondary market.
- The market price of closed-ended fund shares may trade at a premium or discount to the fund's NAV. This reflects market sentiment and demand for the fund's shares, among other factors.
- Closed-ended funds are actively managed, meaning that fund managers make decisions about the fund's investments, in line with the fund's objectives and investment strategy.
- Closed-ended funds often invest in a diversified portfolio of securities across various asset classes, sectors/industries and/or regions, depending on the investment strategy.
- Some closed-ended funds may use leverage (ie, borrowing money to invest) with the aim of enhancing returns. While this can increase potential gains for investors, it can also enhance losses.
- Closed-ended funds may distribute income and capital gains to shareholders periodically, typically in the form of dividends.

Fees and Expenses

Closed-ended funds typically feature lower initial charges and slightly reduced operating expenses compared to open-ended funds. Since closed-ended funds issue a fixed number of shares during their IPO, they do not frequently issue new shares, thereby avoiding the need for the front-end loads that can be seen in open-ended funds. Management fees (ie, AMCs) are generally comparable between the two types of funds, although performance fees are less common in closed-ended funds.

US Closed-Ended Funds

US closed-ended funds share similarities with their counterparts in other regions, these specific features highlight their distinctiveness within the investment landscape. For example, US closed-ended funds are traded on stock exchanges, allowing investors to buy and sell shares throughout the trading day; however, in the US they often have more liquidity compared to their European counterparts, with more shares traded daily. Further, US closed-ended funds also often employ leverage more extensively compared to their European counterparts, potentially enhancing returns but also increasing risk.

European Closed-Ended Funds

In Europe, closed-ended funds are usually known as **investment trusts** and more recently as investment companies. Investment trusts were among the first investment funds to be set up. The first funds were set up in the UK in the 1860s and, in fact, the very first investment trust to be established, the Foreign & Colonial Investment Trust, is still operating today.

Despite its name, an investment trust is actually a company, not a trust. As a company, it has directors and shareholders. However, like a unit trust, an investment trust will invest in a range of investments, allowing its shareholders to diversify and lessen their risk.

Some investment trust companies have more than one type of share. For example, an investment trust might issue both ordinary shares and preference shares (each with different features, such as paying or not paying dividends, with or without capital protection, priority in remaining assets in a wind-down, etc). Such investment trusts are commonly referred to as split capital investment trusts.

In contrast with open-ended funds, investment trust companies are allowed to borrow money on a long-term basis by taking out bank loans and/or issuing bonds. This can enable them to invest the borrowed money in more stocks and shares – a process known as gearing.

Also, some investment trusts have a fixed date for their winding-up. While some investment trusts have predetermined conditions for winding-up, others may have provisions that allow for periodic reviews of the investment trust's performance and objectives, which could trigger discussions on potential winding-up or continuation of the investment trust beyond a certain date.

The price of a share in a closed-ended investment company is driven by demand and supply as with other quoted shares. The share price is therefore arrived at in a very different way from an open-ended fund. However, the share price is said to either be at a premium to the assets that support that price or a discount (an investor would be getting more of the assets per £1 invested).

- The share price of a closed-ended investment company is not necessarily the same as its NAV. The company will value the underlying portfolio daily and provide details of the NAV to the stock exchange on which it is quoted and traded. The price it subsequently trades at will be determined by demand and supply for the shares, and may be above or below the NAV.
- When the share price is above the NAV, it is said to be trading at a premium.
- When the share price is below the NAV, it is said to be trading at a discount.

The NAV describes investors the total value of the fund's portfolio less liabilities:

$$\text{NAV} = \text{total assets} - \text{liabilities}$$

$$\text{NAV per share} = \frac{\text{NAV}}{\text{total outstanding shares}}$$

Example

ABC Investment Trust shares are trading at £2.30. The NAV per share is £2.00. Thus, ABC Investment Trust shares are trading at a premium of 15% to the underlying NAV.

Example

XYZ Investment Trust shares are trading at £0.95. The net asset value per share is £1.00. XYZ Investment Trust shares are trading at a discount of 5% to the underlying NAV.

Most investment trust company shares generally trade at a discount to their NAV. A number of factors contribute to the extent of the discount, and it will vary across different investment companies. Most importantly, the size of the discount is a function of the market's view of the quality of the management of the investment trust portfolio and its choice of underlying investments. A smaller discount (or even a premium) will be displayed where investment trusts are nearing their winding-up, or about to undergo some corporate activity such as a merger or takeover.

Many investment trusts have programmes in place to try and manage the extent of any discount or premium on which the shares are trading. In the case of a discount, the investment trust may be able to buy back listed shares in the stock market; they can either hold them in the treasury, with the potential for reissue at a later date to other investors, or to cancel the shares. Conversely, for those that operate at a premium, new issues of shares can be used to reduce the premium. These programmes are referred to as 'discount control mechanisms' and 'premium control mechanisms' respectively.

In the same way as other listed company shares, an investment trust is listed and traded on a stock exchange, where secondary trading takes place. Due to the way in which closed-ended funds are structured, the fund managers do not have to worry about investing or raising money from investors/unit holders, once the initial seed money has been invested. As a result, they do not become forced buyers or sellers of assets. This is very different to a unit trust fund manager, who needs to take account of fund flows and at times could be forced to invest client money or raise money at the wrong time to meet investment or redemption obligations.

1.3 Exchange-Traded Funds (ETFs)

Learning Objective

4.1.3 Know the basic characteristics of exchange-traded funds (ETFs) and how they are traded

ETFs are a type of open-ended investment fund that are listed and traded on a stock exchange. ETFs represent a natural evolution of investment funds by combining the benefits of traditional CISs with the ease and efficiency of holding and trading shares, making these vehicles more liquid and easier to trade in and out of than the traditional open-ended fund. This liquidity is provided by market makers to trade (buy and sell) the ETF during each trading day.

Many ETFs are passively managed, meaning that they aim to track the performance of an **index or other benchmark** and trade very close to their NAV. Some of these ETFs are more liquid, or more easily tradeable, than others, depending upon the index they are tracking.

Some of their distinguishing features include the following:

- They track the performance of a wide variety of fixed-income and equity indices as well as a range of sector- and theme-specific indices and industry baskets. Some also track actively managed indices.
- The details of the fund's holdings are transparent so that their NAV can be readily calculated.
- They have continuous real-time pricing so that investors can trade at any time.
- They will generally have low bid-offer spreads depending upon the market, index or sector being tracked, for example, just 0.1% or 0.2% for, say, an ETF tracking the **FTSE 100**.

- They have low expense ratios and no initial or exit charges are applied. Instead, the investor pays normal dealing commissions to his stockbroker. An annual management charge is deducted from the fund – the exact percentage varies by fund, with specialised ETFs charging more (eg, those focusing on specific themes or niche sectors) and broad market ETFs charging less.
- ETFs can be used by retail and institutional investors for a wide range of investment strategies, including the construction of core-satellite portfolios, asset allocation and hedging.
- In Europe, they are usually structured as UCITS funds.

In order to achieve their investment objectives, ETF providers can use either physical (ie, investing in actual stocks) or synthetic replication (ie, using derivatives). The risks of the latter have been the subject of intense regulatory scrutiny by regulators around the world.

Index Replication Methods	
Full Replication	• Also called full or physical duplication. • The fund attempts to mirror the index by holding shares in exactly the same proportions as in the index itself. • Consequently, full replication is typically more expensive than other replication methods as more trading is involved. • Full replication is more common in indices with a smaller number of holdings, or in bigger funds where there is more scope to invest in a larger number of shares.
Stratified Sampling	• Involves choosing investments that are representative of the index. The expectation is that, overall, the **'tracking error'** or departure from the index will be relatively low. • The amount of trading of shares required should be lower than for full replication, however, since the fund will not need to track every single constituent of an index. This should reduce transaction costs and, therefore, will help to avoid such costs • eroding overall performance.
Optimisation	• Uses sophisticated computer modelling to build a portfolio by funding holdings that broadly mimic the characteristics of the index. • The optimised sampling approach is more common for indices with a large number of components, in which case the provider would only buy a basket of selected component stocks reflecting the same risk-return characteristics as the underlying index.
Synthetic	• Involves the ETF providers entering into a swap agreement with single or multiple counterparties. The provider agrees to pay the return of a predefined basket of securities to the swap provider in exchange for the index return. • Synthetic replication generally reduces costs and tracking error, but increases counterparty risk. For markets not easily accessible, swap structures do have an advantage over physical replication.

Index Replication Methods	
Synthetic	• The maximum exposure to any swap counterparty for a UCITS fund is limited to 10% of the fund's NAV, so that an ETF will have to have multiple counterparties and will look to hedge its exposure by requiring collateral to be posted with an independent custodian. Most providers disclose the • composition of the collateral taken daily on their websites. • The main advantage of synthetic replication tends to be lower tracking error and lower costs, but with the downside of counterparty risk.

When investing in a passive ETF (or any type of tracker fund), it is important to understand the tracking error. Tracking error arises from both underperformance and outperformance of the index being tracked. A high tracking fund just refers to the amount of deviation from the tracking index and hence should be accompanied by a higher performance than the underlying. Note that there will always be an element of tracking error between a 'live' portfolio and the index that it aims to track, because of the actual costs involved in running the live portfolio (eg, management fees and costs of dealing).

Many ETFs generally track an index, although actively managed ETFs are also available. Another type that is available is 'smart beta'. Instead of tracking just an index, smart beta ETFs will take into account other factors such as volatility or momentum when creating an index that they will track. This encapsulates factor and fundamental-based indices that are constructed through approaches other than free float or price-weighted capitalisation. Hence, smart beta seeks to benefit from both active and passive investing: it follows an index, but is active because it also considers alternative factors.

The legal structure of an ETF varies between jurisdictions. In the US, many ETFs are structured as unit trust investment funds, while in Europe ETFs can be seen as OEICs (eg, in Ireland) and SICAVs and FCPs in Luxembourg. Further, in Europe, many ETFs are structured as UCITS funds, and are domiciled in either Dublin or Luxembourg so that they can be marketed cross border. The underlying structures they adopt, therefore, follow along traditional CIS lines.

1.4 Commodity Funds

Learning Objective

4.2.4 Know the characteristics and uses of commodity funds

Exposure to commodities has traditionally had a place in the portfolios of private clients, especially where they are managed by discretionary investment managers.

Within the asset allocation of a portfolio, a percentage would usually be allocated to commodity exposure. This exposure was usually obtained by holding the shares of companies involved in one aspect or another of the commodities world. For example, an investment manager might determine

that they want to achieve exposure to gold or other minerals and would, therefore, include the shares of companies quoted in the mining sector or an investment fund that specialised in the sector.

Achieving exposure to commodities in this way has never been an optimal solution, as the share price of the company would be influenced by the prospects both for the movement of the underlying commodity and for the company itself. Investors have been able to buy futures and options on commodities, but this has not always been an appropriate solution for retail investors or for those who are looking for an alternative asset class.

One alternative solution for commodity investing is to use exchange-traded commodities (ETCs).

ETCs are investment vehicles that track the performance of an underlying commodity index. There are two main types of ETC, namely single commodity ETCs such as ones that track gold or oil prices, and ones that track a commodity index, such as the S&P GSCI Index (a composite index that measures the performance of the commodities market).

ETCs are open to all investors and can be used for a number of purposes where commodity exposure is needed, such as exposure to a single commodity or as part of an asset allocation strategy. They are an open-ended collective investment vehicle, so additional shares are created to meet demand. They are similar to ETFs in that they are dealt on a stock exchange in their own dedicated segment, they have market maker support so that there is guaranteed liquidity during market opening hours, and they are held and settled in the same way as any other shares. Additionally, ETCs vary in construction, from being fully backed (full replication) to partial replication, to being made up of derivatives/swaps (synthetic ETCs). It is therefore important for investors to understand the true risk profiles of these structures.

2. Other Investment Vehicles

2.1 Structured Products

Learning Objective

4.2.1 Know the characteristics and uses of structured investments

'Structured products' is a term that is used to describe a series of investment products that are more commonly known as structured notes, market-linked notes and a whole variety of other marketing names.

These types of structured products have been around for some time and their features and terms differ markedly from product to product. There are some designed for the mass retail investment market, others that target only the high-net-worth (HNW) or UHNW markets, and some designed specifically and often individually tailor-made, for sophisticated and large customers.

Structured products are packaged products primarily based on combinations of bonds and derivatives which may feature full or partial protection of capital if held to maturity, but with a degree of participation in the return of a riskier underlying asset. They are created to help investors express a

specific short- or medium-term view about an underlying financial instrument or index that cannot be met by standardised financial instruments that are available in the markets.

These products are created by combining underlying assets such as shares, bonds, indices, currencies and commodities with derivatives. This combination can create structures with different risk/return and cost-saving features compared to what might otherwise be obtainable in the market. Below is a simple example of how such a product might work.

Example

- A simple structured product might have a fixed term of five years, 100% capital protection and offer participation in any growth of an index up to a specific limit, such as 60% of the return on the FTSE 100 Index provided the index finishes at or above its starting level. Let us say that an investor chooses to invest £1,000 into the product.
- Within the wrapper of the product may be two underlying investments – a zero coupon bond and a call option.
- The zero coupon bond 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, £1,000 nominal of the bond may be bought for £800 and as it is repayable in five years' time it provides the guaranteed return of capital at the end of the term.
- The remaining £200 of the amount invested goes into a long call option on the FTSE 100 Index which will provide the return on the index if it finishes above its starting level.
- If the index is at or above the starting level at the end of the term, then the investor receives the return of their capital (provided by the repayment of the zero coupon bond) and the return on the index from the payout on the call option.
- If the index is lower, the investor will receive the return of their capital only as the call option will be worthless.

The benefits of structured products can include:

- full or partial protection of initial capital investment
- tax-efficient access to fully taxable investments
- enhanced returns, and
- reduced risk, often combined with limited or capped upside.

Structured products have offered a range of benefits to investors and generally have been used to provide either:

- access to stock market growth with full or partial capital protection, or
- long or short exposure to an asset, such as gold or currencies that would not otherwise be achievable from direct investment.

Their major disadvantages include:

- heavy fee impact on realised returns
- lack of achieving the full growth potential of the underlying assets (as a means to compensate for full or partial capital protection)
- limited secondary market liquidity (usually only provided by the issuer), and

- the fact that they have had to be held to maturity to secure full gains (some recent products have overcome this by including 'kick out' options where the product matures early if the index reaches a certain level).

There is a wide range of listed structured products, and the terms of each are open to the discretion of the issuing financial institution. They are known by a variety of names including certificates and investment notes. They do, however, fall into three broad categories:

Types of Structured Products	
Structured Deposits	Structured deposits are essentially fixed-term deposit accounts where, instead of interest being earned at a set or variable rate, the return is fixed but depends on the performance of the underlying asset, such as the S&P 500. The term may be anything from three to six years and the return a proportion of any growth in the index. For example, such a product might offer a return of 15% if the index is at or above the set level at the end of a three-year fixed term. If the index is higher at the end of the three years, then the investor receives their initial capital back plus interest of 15%. If the index is lower, then they only receive back the amount invested. The advantage of such products is that the investor can potentially earn higher returns than can be achieved from standard savings accounts. The investor is, however, exposed to the risk that there may be no return if the index is below its starting level. In the event of the potential default of the provider, investors may benefit from protection under a country's deposit protection scheme or investor compensation scheme, as structured deposits are on-balance sheet items for the financial institution issuing them.
Structured Capital Protected Products	Structured capital protected products are similar to structured deposits in that they are designed to return the original capital at maturity as a minimum. Typically, the return offered will be greater than that available on structured deposits and may have other features not found in a structured deposit. For example, a product might offer a return of 30% if the index is above the starting level at the end of a five-year term. If it is higher, the investor gets back the initial investment plus the return; if it is lower, then they get back their initial investment but nothing extra.
Structured Capital at Risk Products (SCaRPs)	SCaRPs generally offer the highest return on investment because as well as the potential returns, there is a risk that some or all of the capital invested may be lost. They may have partial capital protection. For example, a product may offer a set return if the index is at or above its starting level at the end of a five-year term. If the index is lower but not less than 50% of its starting level, then the capital is returned in full; if it is below that then the investor loses some or all of their capital. Other SCaRPs may offer no capital protection at all and instead offer 100% exposure to the movement of the underlying index.

Within these three broad categories, there are then many variations on the theme. One such variation is the inclusion of additional features such as early redemption options and step-up returns.

Structured capital protected products and SCaRPs, although described as capital-protected, are usually not protected by deposit protection or investor compensation schemes and carry the risk of insolvency of the product issuer. Often this risk is high, because although the products may be seen as issued by a strong financial institution, they may be technically off-balance sheet items for that institution, so investors are in fact exposed to a high risk of issuer insolvency and hence no capital protection.

It is important that investors understand the risks of structured products before deciding whether to invest in one, particularly with structured deposits where there is a risk that an investor may see it as an alternative to a bank savings account that is just as safe. Some of the key risks to be aware of are as follows:

- Investors must be prepared to leave the amount uninvested for the full fixed term otherwise they may get back less than they paid in. Many structured products do not permit early withdrawals and those that do may charge an exit fee.
- There is a risk that they will receive no return at all if the index is below the anticipated level. With structured deposits and structured capital protected products, the initial capital is returned but with a zero return. In such cases, the investor would have been better off simply investing in a savings account where they would have at least earned some interest.
- There is a risk with structured capital at risk products that they will not only receive no return on their investment, but they will lose some or all of the capital invested as well.
- Inflation can erode the value of any return achieved on the product. That said, this risk also applies to other savings and investment products that are not inflation protected.
- Any deposit protection scheme or investor compensation scheme may not protect the investment if the provider of the product were to fail.

2.2 Hedge Funds

Learning Objective

4.2.2 Know the characteristics and uses of hedge funds

Hedge funds are reputed to be high-risk. However, in many cases this perception stands at odds with reality. In their original incarnation, hedge funds sought to eliminate or reduce market risk. That said, there are now many different styles of hedge fund – some risk-averse and some employing highly risky strategies. It is, therefore, not wise to generalise about them: they can no longer be typified and are best treated as complex securities most suitable for sophisticated and experienced investors.

Hedge funds first appeared in the 1950s and were termed so, because they tried to hedge their positions in an effort to achieve a steady performance despite market conditions. These funds were later termed as 'Absolute Return' or 'Total Return' funds. Although the term remained and characterised the entire 'hedge fund industry', only a number of hedge funds define themselves as Absolute Return seeking to deliver steady returns, while the majority aim to deliver returns that outperform the markets, by employing a range of diverse strategies and tactics.

The most obvious market risk is the risk that is faced by an investor in shares – as the broad market moves down, the investor's shares also fall in value.

An absolute return fund seeks to make positive returns in all market conditions by employing a wide range of techniques including short selling, futures and options, derivatives, arbitrage, leverage and unconventional assets.

In the fixed-income space – an absolute return fixed-income strategy may be attractive as it can provide an income, but with the flexibility to target the most attractive areas of the fixed-income market and protect against rising interest rates to also preserve the underlying capital.

2.2.1 Hedge Fund Characteristics

Innovation has resulted in a wide range of complex hedge fund strategies, some of which place a greater emphasis on producing highly geared returns rather than controlling market risk.

The common aspects of hedge funds are the following:

- **Structure** – hedge funds are established as unauthorised and therefore unregulated collective investment schemes, meaning that they cannot be generally marketed to private individuals because they are considered too risky for the less financially sophisticated investor.
- **High investment entry levels** – most hedge funds require minimum investments in excess of $100,000; while some exceed $1 million. This means that access is effectively restricted to wealthy investors and institutions; however, investors can also gain access to hedge funds through funds of hedge funds.
- **Investment flexibility** – because of the lack of regulation, hedge funds are able to invest in whatever assets they wish (subject to compliance with the restrictions in their constitutional documents and prospectus). In addition to being able to take long and short positions in securities like shares and bonds, some take positions in commodities and currencies. Their investment style is generally aimed at producing 'absolute' returns – positive returns regardless of the general direction of market movements.
- **Gearing** – many hedge funds borrow funds and use derivatives, to potentially enhance their returns.
- **Liquidity** – to maximise the hedge fund manager's investment freedom, hedge funds usually impose an initial 'lock-in' period of between one and three months before investors can sell their investments on.
- **Cost** – hedge funds typically levy performance-related fees, which the investor pays if certain performance levels are achieved, otherwise paying a fee comparable to that charged by other growth funds. Annual management fees are usually 1% to 2% of assets under management (AUM), while performance fees can be substantial, such as 18% to 20% or more of the profit over the last highs of the fund's NAV price (also called the 'high water mark').

2.2.2 Hedge Fund Strategies

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 and the investments utilised. Below are brief descriptions of some of the common types encountered.

Fixed-income Arbitrage (FIA)

Fixed-income arbitrage (FIA) seeks to exploit inefficiencies in interest rate yield curves, corporate spreads and/or pricing of government bonds, swaps and other derivatives based upon interest rates. For example, if the yield curve is expected to steepen, with the yields on long-term bonds moving up more than short-term yields, the strategy would be to buy a two-year government bond and sell a 20-year government bond, for example.

Non-Directional Strategies

A non-directional hedge fund is a hedge fund that aims to generate a stable return regardless of market performance with low volatility – the fund uses hedging to mitigate market fluctuations so its performance depends solely on the manager's skill. The expected returns from these strategies may be limited, but owing to their relatively low volatility and low correlations with traditional markets (at least during non-critical periods) they are often implemented with high leverage, which magnifies the returns (and losses). When the money markets are behaving erratically, as in the second half of 2008, drawdowns can be very substantial.

Market Neutral

Known as equity arbitrage. The strategy is to combine long and short positions, while balancing the beta exposure (the degree to which the movements in prices of the security will track movements in the overall market) to ensure a zero or negligible market exposure.

The emphasis is on stock picking as opposed to having a single directional view of the market. One favoured strategy is pairs trading, in which one takes converse positions in correlated securities, such as going long on a major oil company such as BP and short another oil company such as Shell.

Convertible Arbitrage

Another relative value strategy focuses on those securities which have convertible features. The objective is to profit from mispricing of a convertible security and/or expected trends in factors influencing the price of a convertible security.

Typically, the strategy will involve a combination of a long position in the convertible security and a short position in the underlying stock.

Statistical Arbitrage (StatArb)

This involves any strategy that is bottom-up, beta-neutral in approach and uses statistical/economic techniques in order to provide signals for execution. Signals are often generated through a belief in the notion of mean reversion. This relates to the discussion of the notion that if a security has strayed a 'long' way from its mean performance, eventually it will tend to revert back towards its mean performance (the concept of 'long' can vary depending on the specific strategy and the market conditions). Also involved in StatArb trading are ways of investing in securities which have favourable momentum characteristics that can be determined by statistical measures such as rate of change and other technical characteristics of the price behaviour.

Event-Driven

- **Special situations** – seeks to profit from a change in valuation as a result of a corporate action or takeover and is generally not a long-term investment. An example would be a large public company spinning off one of its smaller business units into a separately tradeable public company. If the market deems the soon-to-be-spun-off company to have a higher valuation in its present form than it will after the spin-off, an investor might buy shares in the larger company before the spin-off in an attempt to realise a quick price increase.
- **Distressed securities** – seeks to profit from dealing in (usually debt) securities of companies having difficulties in meeting their financial obligations, whereby their debt securities trade well below nominal value; and take long or short position in such distressed securities depending on their views on the company and the market.
- **Merger arbitrage** – seeks to profit from the spreads in announced mergers and acquisitions (M&A) or takeovers. The approach is to buy the stock of the target company in an M&A deal and sell the acquiring company's stock. Profits are realised when the deal is consummated, and the stock prices converge. Such strategies are usually considered to be low risk, but there can be substantial risks if the M&A deal falls through.

Directional Strategies

These cover all of the numerous styles of investing when the manager expresses a view as to the future direction of a particular asset class and/or the overall market. Directional strategies require the manager to speculate as to the absolute values of the securities that will be included in a portfolio.

Directional strategies can be subdivided into two categories: equity hedge and tactical trading.

Equity Hedge

- **Long/short equities**
  The portfolio will consist of securities that are on both the long and short sides of the market. The decision as to which securities to invest in will be based on individual judgements about the future direction of each security, rather than the top-down approach which uses a beta valuation designed to achieve a market-neutral portfolio from being long and short beta in the appropriately engineered, correct ratios.

  In essence a long/short equity strategy aims to identify securities that are mispriced relative to the manager's internal valuation models.

  These strategies differ from the non-directional (relative value, event-driven) strategies in that they typically take the market direction risk (either long or short) as part of their investment approach.

  Market exposure may be net long, net short, or neutral at any given time. The strategy should outperform in **bear markets** by aiming to deliver absolute returns, but they will tend to underperform in sharply rising markets.

Tactical Trading

- **Global Macro**
  The broad philosophy behind global macro investing is to find large-scale themes in the global capital markets, identify trading opportunities and to take large positions on broad indices and currencies.

George Soros' hedge fund was known for its global macro strategies, as it sought to make profits. from opportunistically trading global markets through concentrated bets in various asset classes, for example, famously taking a large-scale short position in the British Pound effectively against the Bank of England.

- **Systematic Strategies**
  Systematic strategies use mathematical models to evaluate markets, detect trading opportunities and generate signals and investment decisions. The systems used in this category can be classified as trend-following, which means essentially that the models seek out trends and then ride out those trends; or there are other systematic strategies which, for example, look for trading markets at extremes or are based on intermarket tactics such as alignment between certain key foreign exchange rates such as the Japanese yen and the Australian dollar and global equities.

  Sometimes systematic strategies are known as black-box methods because they contain proprietary indicators and analytical tools which the creators do not wish to disclose to investors.

2.3 Private Equity

Learning Objective

4.2.3 Know the characteristics and uses of private equity

Private equity is medium- to long-term finance, provided in return for an equity stake in potentially high-growth companies. It can take many forms, from providing venture capital to complete buyouts. This asset class can offer relatively poor liquidity, while giving exposure to strong growth areas and potentially attractive returns.

For a firm, attracting private equity investment is very different from raising a loan from a lender. Private equity is invested in exchange for a stake in a company and the investors' returns depend on the growth and profitability of the business. Therefore, it faces the risk of failure, just like other shareholders.

The private equity firm is rewarded by the company's success, generally achieving its principal return through realising a capital gain on exit. This may involve:

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

Private equity firms raise their capital from a variety of sources, but mainly from large investing institutions. These may be happy to entrust their money to the private equity firm because of its expertise in finding businesses with good potential.

Few people or institutions can afford the risk of investing directly in individual buyouts and, instead, use pooled vehicles to achieve a diversification of risk. Traditionally this was through investment companies; however, with the increasing amount of funds being raised for this asset class, however, methods of raising investment have moved on. Private equity arrangements are now usually structured

in different ways to more retail-focused CISs – they are usually set up as limited partnerships, with high minimum investment levels. As with hedge funds, there are generally restrictions on when an investor can realise their investment.

2.4 *Sukuk* Investments

Learning Objective

4.2.5 Know the characteristics and uses of sukuk investments

Islamic finance is the approach used to determine what are acceptable investments and ways to raise capital under Shariah law.

A central element of Islamic finance is the importance of risk-sharing as part of raising capital and the avoidance of *riba* (interest) and *gharar* (excessive risk or uncertainty). Charging or receiving interest is haram, which means prohibited, as it is considered usurious and exploitative; thus, it rules out the use of traditional bonds as an investment medium. Financial products where details concerning the conditions of sale are unknown or uncertain are generally prohibited under Islamic law. Thus, all contracts should be devoid of uncertainty and speculation and parties must have perfect knowledge of the terms of exchange. In particular, the identification of the owner of the goods must be disclosed.

The absence of interest in Islamic finance is one of the key factors that differentiate Islamic finance from conventional finance. However, there are other important differences as shown below:

- Islamic banking is asset backed, which means that an Islamic bank does not carry out business unless an asset is purchased to allow the transaction to be conducted according to Shariah.
- The source of the Islamic bank's funding, profits and business investments cannot be in/from businesses that are considered unlawful under Shariah, such as companies that deal in interest, gambling, pornography, speculation, tobacco and other commodities contrary to Islamic values.
- The whole premise of Islamic banking is to provide a way for society to conduct its finances in a way that is ethical and socially responsible. Trade, entrepreneurship and risk-sharing are encouraged and these are the financial principles that underpin Islamic finance and the products offered by Islamic banks.

Islamic law, the Shariah, bans the payment or receipt of interest and, as a result, rules out the use of traditional bonds as an investment medium.

Islamic bonds or sukuk are always linked to underlying assets, whether tangible or intangible assets. Holding a sukuk represents a partial ownership in assets and so sukuk are neither shares nor bonds; instead, they represent a little of each. This means that the return on a sukuk is calculated according to the performance of the underlying assets or projects.

Characteristics of *Sukuk*

- It is a participation in the ownership of the company issuing the sukuk.
- Each bond represents an ownership of the underlying asset. The bond holder also bears, as owner, risks proportionate to their share of the underlying asset.
- Bond holders have the right to profits but also to bear losses. They do so, based on the nature of the underlying Islamic contract, and the trend within Islamic finance is that profit and loss in any sukuk investment should be proportionate to the investor's ownership of the assets.
- The maturity of the bond is linked to an underlying project or activity.
- Financial guarantees are not typically allowed in Islamic contracts meaning that the investment is not guaranteed for investors.

The Accounting and Auditing Organisation for Islamic Financial Institutions (AAOIFI) has specified different categories of permissible *sukuk* and a number of techniques that can be employed to structure a *sukuk* transaction. The choice of structure type will depend on various factors, including the character of the underlying assets, taxation and regulatory considerations, the targeted investor base and the views of the Shariah scholars who must approve the *sukuk* issuance.

The most commonly used sukuk structures in the market are *ijara*, *murabaha* and *mudaraba-wakala*. A *sukuk al-ijara* is regarded as the classical sukuk structure and has become the most commonly used type, especially for international issues. It is popular because it is simple and widely accepted and understood by both conventional and sukuk investors as well as by the international rating agencies. A straightforward example of such a sukuk is shown below.

Sukuk Al-Ijara

- *Ijara* is the transfer of the use of a tangible asset to another person in exchange for a rent.
- An Ijara sukuk involves the transfer of ownership of tangible assets such as real estate, aircraft or ships from an originator to a special purpose vehicle (an SPV) – such as a company specially incorporated for that purpose.
- The SPV issues *sukuk* certificates to investors representing undivided ownership interests in such assets.
- The asset is then leased back to the originator by the SPV for a specified term which is typically commensurate with the term of the certificates.
- Each *sukuk* holder is entitled to receive the rentals generated under the lease pro rata to its ownership interest in the underlying asset.
- On the issue date, the originator will enter into purchase undertaking which gives the right to the SPV to oblige the originator to purchase the assets at maturity. The money received by the SPV will be used to pay the repayment amount due to investors under the *sukuk*.

The use of sukuk has grown substantially over recent years and there is now an active primary market in the issue of bonds and secondary markets where they can be traded, especially in the Middle East. Equally, a growing number of Shariah investment funds have been launched, which give investors exposure to both sukuk and other Shariah-compliant investments.

End of Chapter Questions

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

1. **How might the pooling of investments aid a retail investor?**
   Answer reference: Section 1.1

2. **What is the difference between an open-ended fund and a closed-ended fund?**
   Answer reference: Sections 1.2.1 and 1.2.4

3. **In which type of collective investment vehicle would you be most likely to expect to see a fund manager quote bid and offer prices?**
   Answer reference: Section 1.2.3

4. **Who is the legal owner of the investments held in an OEIC?**
   Answer reference: Section 1.2.3

5. **How does the trading and settlement of an authorised unit trust differ from an ETF?**
   Answer reference: Sections 1.2.3 and 1.3

6. **Which type of collective investment vehicle can trade at a premium or discount to its net asset value (NAV)?**
   Answer reference: Section 1.2.4

7. **What are the four replication methods that passively managed funds can apply?**
   Answer reference: Section 1.3

8. **What are the two main types of exchange-traded commodity?**
   Answer reference: Section 1.4

9. **What type of strategy makes extensive use of short positions?**
   Answer reference: Section 2.2.1

10. **What is the term for bond type investments that are acceptable under Shariah law?**
    Answer reference: Section 2.4

Chapter Five

Economics and Investment Analysis

1. **Macroeconomic Theory** 143
2. **Central Banks** 167
3. **Microeconomic Theory** 170
4. **Statistics** 183
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6. **Fundamental and Technical Analysis** 199
7. **Yield and Ratios** 203
8. **Valuation** 214

This syllabus area will provide approximately 21 of the 100 examination questions

1. Macroeconomic Theory

An understanding of economics is essential for advisers/wealth managers, as they need to be aware of what is happening in the economy as this may affect the advice given to clients.

Economics involves the study of how individuals, firms and countries behave in response to the scarcity of resources to meet their needs. Scarcity refers to the natural limitations there are on the availability of resources to meet needs and requires individuals, firms and countries to make decisions about which goods and services they can buy and which they must forgo. So, because of scarcity, they must make decisions over how to allocate their resources. Economics, in turn, aims to study why we make these decisions and how we allocate our resources most efficiently.

The study of economics can be divided into two broad categories:

- **Microeconomics** – as its name suggests, this is the smaller picture view of the economy; that is, the study of the decisions made by individuals and firms in a particular market.
- **Macroeconomics** – this takes the bigger picture view by seeking to explain how, by aggregating the resulting impact of these decisions on individual markets, variables such as national income, employment and inflation are determined. This can be seen as the economic environment within which we all live and in which the financial markets operate.

Adam Smith, an 18th century economist and philosopher known as 'the father of economics', categorised resources into three main types: land, labour and capital.

In more recent economic theory, sometimes referred to as the neoclassical school of economics, a fourth factor of production has been added to the list: enterprise (also called organisation). This emphasises the integral role performed by entrepreneurs in combining the above three resources together into productive and wealth-creating businesses.

The task of economics is to measure and foster economic growth which will then lead to greater social welfare and happiness (in theory).

It is important for candidates to keep up to date with current affairs such as inflation, interest rates, and monetary and fiscal policies, along with global events and their implications. Economic indicators, geopolitical developments and central bank decisions directly influence market dynamics and shape economic models. By staying informed, candidates can use this knowledge to contextualise theoretical frameworks and anticipate market movements, which should in turn drive informed investment decisions.

1.1 National Income

Learning Objective

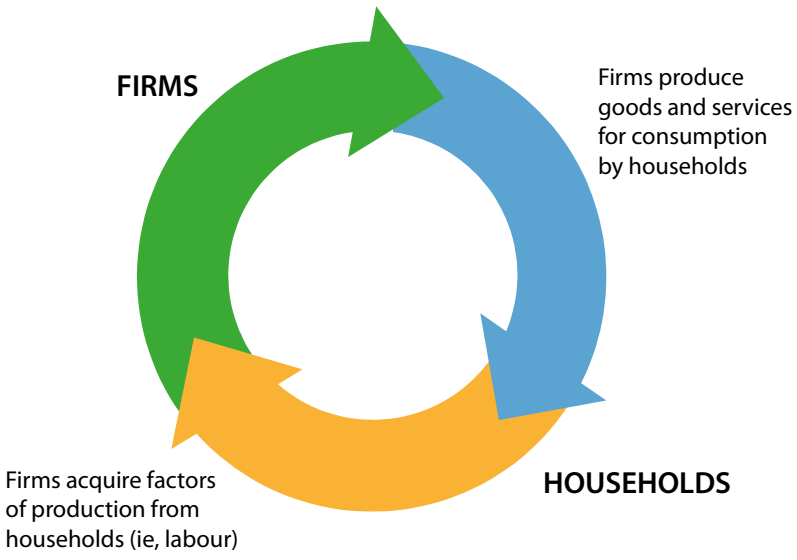
5.1.1 Know how national income is determined, composed and measured in both an open and closed economy: gross domestic product (GDP); gross national product (GNP)

From the perspective of overall economic activity, one of the foundation stones of macroeconomic theory is the notion that there is a circular flow which results from the interaction between the two principal actors (or agents) in an economy: households and firms.

1. **Households** – in its broadest sense, this comprises the owners of the factors of production and their input into economic processes through their labour, the use of land and the resources which are ultimately part of a commonwealth and the application of capital.
2. **Firms** – these are the entities which result from the combination of the three primary resources (land, labour and capital) and their integration by enterprise or organisation.

The first perspective of these two can be seen diagrammatically as the production cycle.

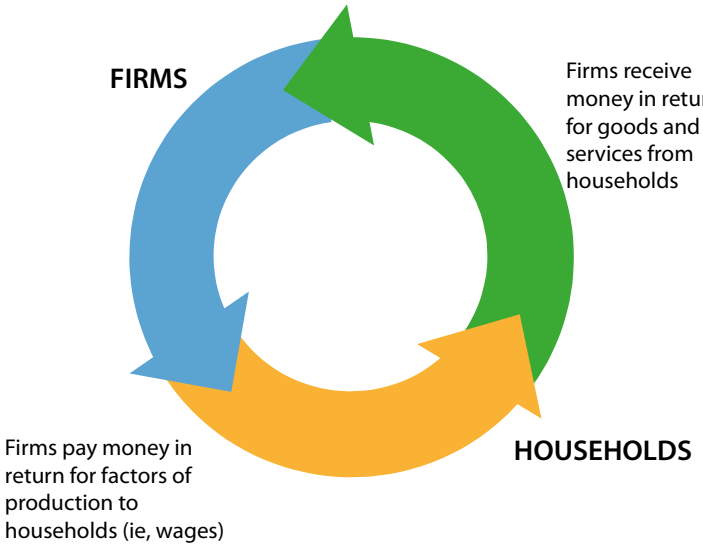
The production or output cycle



As can be seen, there is an interconnected flow of households supplying the factors and the demand for their utilisation from firms. This creates what can be called the economic output cycle.

The second perspective, which is more or less the same as the first, is a circular flow in the opposite direction to the flow of money through the system in which consumers or households purchase goods and services – expenditure – from the firms. They then use this income or revenue to purchase labour, land and capital from the households. This can be called the income and/or expenditure cycle.

The income and expenditure cycle

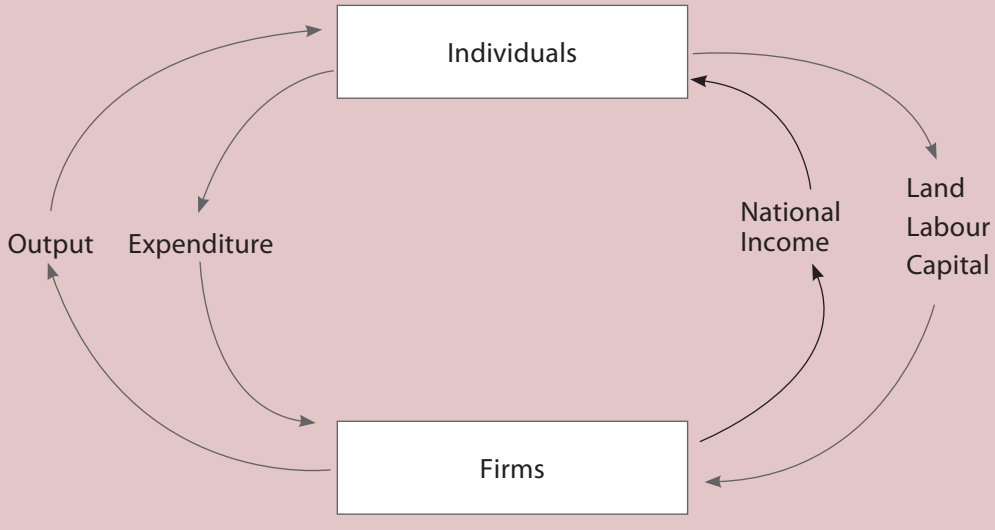


1.1.1 National Income and Gross Domestic Product (GDP)

Gross domestic product (GDP) is a measure of the output of the country as a whole and is a widely watched indicator of the health of the economy.

It is derived from the circular flow of income, as shown in the following simplified model.

Simplified Model of the Economy



In this simplified model of the economy, economic activity can be measured in one of three ways:

- the total income paid by firms to individuals
- individuals' total expenditure on firms' output, or
- the value of total output generated by firms.

Each measure should produce the same answer in this simple economy. However, as economies develop from simple agrarian barter-based societies through to manufacturing-based and finally services-based, or post-industrial economies with developed monetary and financial systems, so this simple model of the economy becomes more complex.

These complexities arise from:

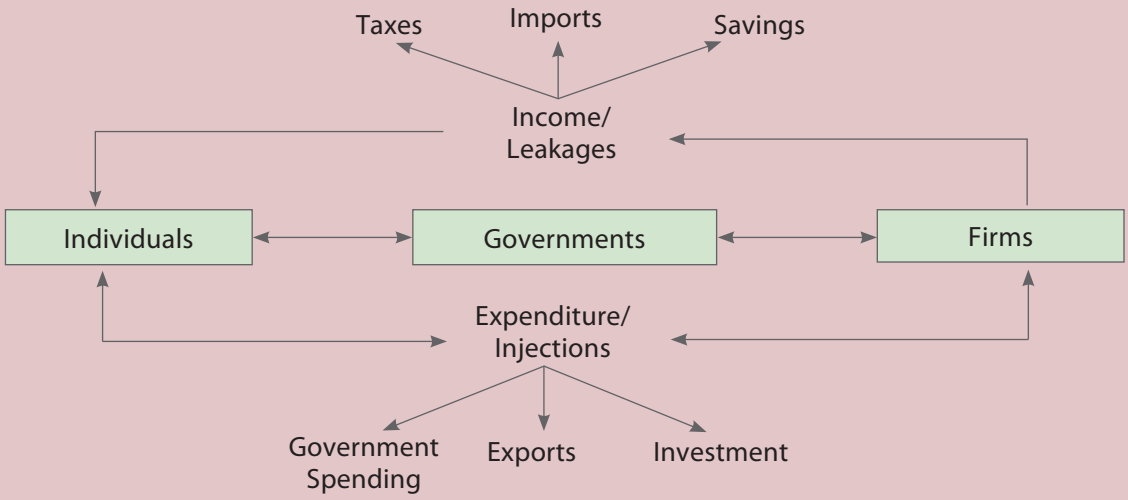
- individuals saving some of their income for future consumption
- financial markets channelling these savings to firms to invest in both new and replacement capital equipment for future production
- government spending and taxation decisions, or
- international trade becoming an integral part of the economic system.

Consequently, the circular flow becomes subject to:

- injections in the form of business investment, government spending and firms' exports to overseas economies, and
- leakages in the form of saving, taxation and imported goods and services.

Moreover, by engaging in international trade, an economy that could once be described as closed (ie, one that has no trading activity with outside economies) becomes an **open economy** (ie, one where a significant percentage of its goods and services are traded internationally). The diagram below shows how the simple model shown above becomes more complex with these factors incorporated.

Circular Flow of Income



At a national level, the amount of economic activity within the circular flow is measured by the National Income Accounts (NIAs) on either an income, expenditure or output basis and stated in terms of gross domestic product (GDP) or **gross national product (GNP)**.

1.2 Gross Domestic Product (GDP) and Gross National Product (GNP)

1.2.1 GDP

GDP measures the total market value of all final goods and services produced domestically during a calendar year. Market value is the value of output at current prices, inclusive of indirect taxes, such as VAT.

Another way of putting this is that GDP is a measure of the final output of a nation's economy, where final output is defined as the value of goods and services purchased by the end user. Hence, it provides an indication of the level of economic activity taking place within a country.

The GDP measure must be reported in two formats: the percentage change within the most recent quarter of reference compared to the previous quarter (to observe short-term changes), and the percentage change compared to the same quarter of the previous year (to identify year-over-year growth or decline).

The year-on-year statistics are the most useful in assessing the trend of the data, whereas those looking for improvements or deteriorations in the trend will be more focused on the changes from quarter to quarter. It is important, if looking to draw conclusions from this data set, to understand that GDP is a lagging indicator, as it takes time to compile and is often subject to revisions, when more up-to-date information becomes available. As a result, some observers may wish to pay more attention to the general trend, as opposed to absolute figures.

The reason for GDP being 'gross' is because it is calculated before making allowance for the depreciation in the capital stock of the economy. In simple terms, capital stock is the plant, equipment and other assets used in production within an economy. Depreciation is the gradual decrease in value of that stock through physical depreciation, obsolescence or changes in demand.

The most common method of calculating GDP is the expenditure method, using the following formula:

$$\text{GDP} = \text{Consumption} + \text{Investment} + \text{Government Spending} + (\text{Exports} - \text{Imports})$$

The formula is often abbreviated to GDP = C + I + G + (X – M) and each component is defined as follows:

- **Consumption** (C) – represents personal expenditure of households on goods and services (eg, food, rent and utilities.
- **Investment (I)** – represents expenditure by businesses and individuals for capital investment.
- **Government spending** (G) – is the sum of government spending on goods and public sector jobs.
- **Exports** (X) – captures the amount of goods produced for export to other countries.
- **Imports** (M) – subtracts the value of goods and services imported from other countries.

1.2.2 GNP

Both GDP and GNP try to measure the market value of all goods and services produced for final sale in an economy. However, what differentiates GDP from GNP is that GDP measures domestic levels of production, while GNP also includes the contribution made during the calendar year to an economy's circular flow by its nationals (both firms and individuals) based outside of the country's borders. This contribution is known as net property income and comprises wages, profits, interest and dividends.

Depending on circumstances, a country's GNP can be either higher or lower than its GDP. The GNP of the US, for example, is higher than its GDP due to the mass production that takes place from owned assets outside of the country's borders (eg, by subsidiaries of US companies).

Example

If a Japanese multinational produces cars in the UK, this production will be counted towards UK GDP. However, if the Japanese firm sends £50 million in profits back to shareholders in Japan, then this outflow of profit is subtracted from GNP. UK nationals don't benefit from this profit which is sent back to Japan.

As so many countries have many foreign investments and nationals working abroad, GNP is becoming less used, and GDP represents the most commonly used measure of economic activity.

1.2.3 Uses and Limitations of GDP Measures

GDP is important as it gives information about how an economy is performing. The growth rate in real GDP is often used as an indicator of the general health of the economy.

GDP gives information about the size of the economy and how it is performing, but because GDP is collected at current, or nominal prices you cannot compare one period with another without making adjustments for inflation. The adjusted figure is real GDP which is its nominal value adjusted for inflation using a statistical tool known as the price deflator or GDP deflator.

By dividing GDP by the population, one obtains GDP per capita (or GDP per head). GDP per capita, along with growth of GDP between calendar years (more commonly known as economic growth) are used as barometers of national prosperity (or standard of living). However, whereas GDP and GDP per capita are calculated at market prices (or in nominal terms), economic growth is always expressed in real terms. The difference between real and nominal GDP is accounted for by a broadly based measure of inflation known as the GDP deflator.

Economic growth, as a barometer of national prosperity, does, however, have significant shortcomings:

- The effects of economic growth may just benefit a narrow section of society, rather than society as a whole, depending on the composition and distribution of GDP.

- GDP, and therefore economic growth, only capture those aspects of economic activity that are measurable. Therefore, both fail to account for:
  - the undesirable side effects of economic activity, such as pollution and congestion
  - non-marketable production such as DIY
  - the subjective value attributed to leisure activities
  - economic activity in the so-called shadow economy, where certain activities go unrecorded as a result of tax evasion.

A further limitation of GDP data is simply the complexity of collecting the data and the time it takes to do so. The initial reported GDP figures are constantly revised upwards or downwards owing to the time lag in collecting data.

1.3 The Economic Cycle

Learning Objective

5.1.2 Know the stages of the economic cycle

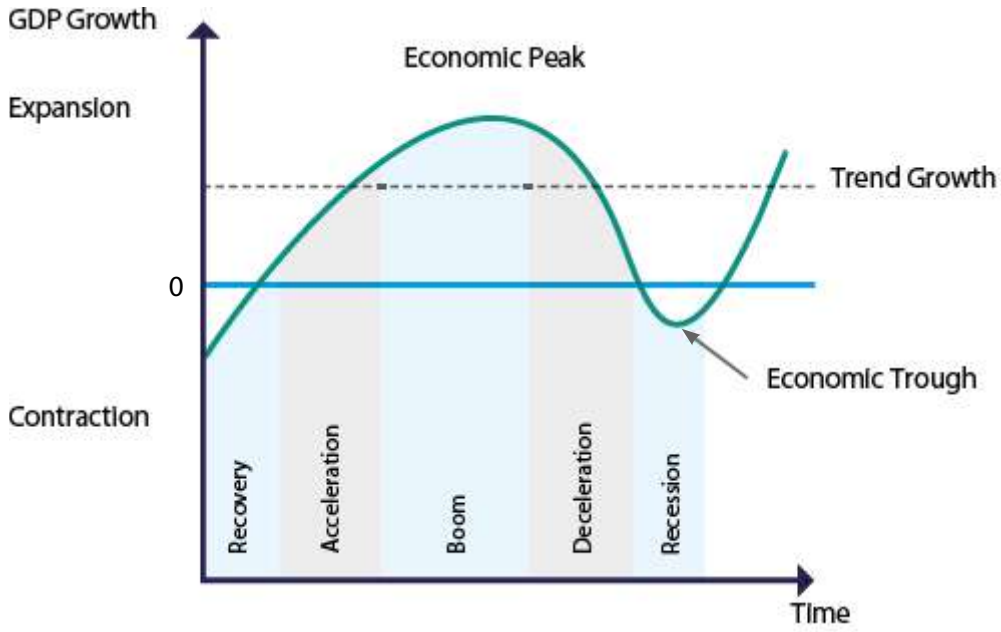
There are many sources from which economic growth can emanate, but in the long run, the rate of sustainable growth (or trend rate of economic growth) ultimately depends on:

- the growth and productivity of the labour force
- the rate at which an economy efficiently channels its domestic savings and capital attracted from overseas into new and innovative technology and replaces obsolescent capital equipment, and
- the extent to which an economy's infrastructure is maintained and developed to cope with growing transport, communication and energy needs.

This trend rate of economic growth also defines an economy's **potential output level** or full employment level of output (ie, the sustainable level of output an economy can produce when all of its resources are productively employed).

When an economy is growing in excess of its trend growth rate, actual output will exceed potential output, often with inflationary consequences. However, when a country's output contracts (that is, when its economic growth rate slows and if it turns negative for at least two consecutive calendar quarters), the economy is said to be in recession, or entering a deflationary period, resulting in spare capacity and **unemployment**. From a statistical point of view, trend growth is reported as either being above 50, meaning that the economy is growing (or even if slowing, so long as above 50 there is growth in that quarter) to below 50, meaning it is contracting.

The fact that actual growth fluctuates and deviates from trend growth in the short term gives rise to the **economic cycle** (also called the business cycle).



Economic cycles describe the course an economy conventionally takes, as economic growth oscillates in a cyclical fashion. The length of a cycle is measured either between successive economic peaks or between successive economic troughs. 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.

The duration and characteristics of economic cycles can vary widely as they are influenced by various factors (eg, fiscal and monetary policies, technological advancements, geopolitical events, and shifts in consumer and investor confidence). To give an example, the economic cycle following the global financial crisis extended for over a decade, driven by factors such as accommodative monetary policy (eg, low interest rates) and fiscal stimulus measures (eg, tax cuts). This extended period of growth came to an abrupt halt with the onset of the COVID-19 pandemic in 2020, which led to a sharp contraction in economic activity worldwide.

The diagram describes a conventional view of the cycle but, as described above, it does not always follow the pattern so precisely.

Critically for investment, there is a strong relationship between economics and investment; and the performance of various sectors of the economy is heavily influenced by economic factors, notably where in the economic cycle the economy is currently positioned. For example, shifts in interest rates can impact the attractiveness of assets such as bonds; fluctuations in consumer spending patterns directly affect industries such as retail, hospitality and leisure; and changes in commodity prices (driven by economic growth or contraction) can significantly impact companies engaged in resource extraction and production.

As a result, most investment managers follow a global approach to investing, which involves reducing exposures to those economies slowing and preferring those economies around the globe that are growing, or not contracting as much in times of recession or global economic slowdown. There is often a lag effect between the economy and investment markets (eg, asset markets sometimes pick up before actual recovery owing to sentiment and forward forecasting). Hence, that is why markets are referred to as 'forward-looking' based on expectations. If those expectations are not met or they change, investment markets react.

1.4 The Balance of Payments and International Trade

Learning Objective

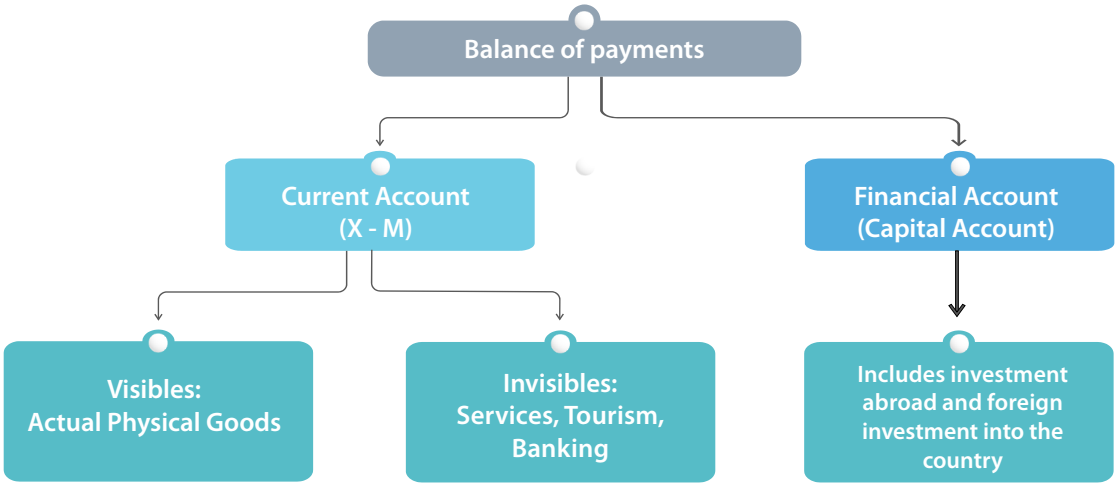
5.1.3 Know the composition of the balance of payments and the factors behind and benefits of international trade and capital flows: current account; imports; exports

The **balance of payments** in an economy measures the payments between that country and others. It is a summary of all economic transactions between one country and the rest of the world, typically conducted over a calendar year, and is made up of the country's exports and imports of goods, services and of transfers of financial capital. It measures all the payments received, and money owed, from overseas parties, less all the payments made, and debts owed, to people overseas.

The accounts used to measure the balance of payments are:

- the current account (short-term flows) and
- the capital account (longer-term transactions).

1.4.1 Current and Capital Accounts



Current Account

The current account is used to calculate the value of goods and services that flow into and out of a country over the short term. This is usually divided into visible items (eg, those arising from the trade of raw materials and manufactured goods) and invisible items (eg, those arising from services such as banking, financial services, or tourism). In other words:

- The visible trade balance is the difference between the value of imported and exported goods.
- The invisible trade balance is the difference between the value of imported and exported services.

Added to these figures are other receipts, such as dividends from overseas assets, and remittances from nationals working abroad.

The results of the current account calculations provide details of the balance of trade that a country has with the rest of the world. If a country has a trade deficit in one of these areas or overall, then it imports more than it exports; and if it has a trade surplus, then it exports more than it imports.

The current account balance is usually seen as the most important component of the balance of trade, because it has the greatest impact on other economic factors such as output and employment.

Capital Account

The capital account records international capital transactions related to investment in business, real estate, bonds and stocks. This includes transactions relating to the ownership of fixed assets, and the purchase and sale of domestic and foreign investment assets. These are usually divided into categories such as:

- foreign direct investment (FDI), where an overseas firm acquires a new plant or an existing business
- portfolio investment, which includes trading in stocks and bonds, and
- other investments, which include transactions in currency and bank deposits.

For the balance of payments to 'balance', the current account must equal the capital account plus or minus a balancing item used to rectify the many errors in compiling the balance of payments, plus or minus any change in central bank foreign currency reserves. For example, a current account deficit resulting from a country being a net importer of overseas goods and services must be met by a net inflow of capital from overseas, taking account of any measurement errors and any central bank intervention in the foreign currency market.

The subject of the balance of payments is intrinsically linked to international trade, exchange rates and international competitiveness.

1.4.2 Exchange Rates

A country's currency's exchange rate fundamentally impacts its balance of payments.

The exchange rate is the rate at which one currency trades against another on the foreign exchange market. Like most other rates in economics, the exchange rate is essentially a price: the amount that should be given up to acquire something else, in this case another currency. An exchange rate is therefore the price that will be paid in one currency to buy another.

An exchange rate is determined by supply and demand. Factors influencing this include the following:

- **Economic outlook** – general expected health of an economy.
- **Inflation** – if inflation in a country is lower than elsewhere, then its exports will become more competitive and there will be an increase in demand for its currency. The currency will rise and this will make imported goods less competitive.
- **Interest rates** – If interest rates in one country rise relative to those of another, then that country's currency will become attractive to investors seeking higher returns. Consequently, the demand for that currency, and therefore its exchange rate, will rise.
- **Change in competitiveness** – if a country's exports become more attractive and competitive, this will cause its exchange rate to rise.
- **Balance of payments** – if imports are greater than exports, this will create a deficit on the current account which needs to be financed by a surplus on the capital account. If a country fails to attract sufficient capital inflows, then there will be a depreciation in the value of the currency.
- **Speculation** – speculative activity in the foreign exchange markets can cause exchange rates to rise or fall.
- **Relative strength of other currencies**.

Purchasing Power Parity (PPP)

PPP is a theory which states that the exchange rate between one currency and another is in equilibrium when their domestic purchasing powers at that rate are equivalent. In simple terms, this means that a basket of goods should cost the same in each country once the exchange rate is taken into account. The theory tells us that price differentials between countries are not sustainable in the long run, as market forces will equalise prices between countries and change exchange rates in doing so.

Exchange rates are determined using either a fixed exchange rate system or a floating exchange rate system.

Fixed and Floating Exchange Rate Systems	
Fixed exchange rate system	• The exchange rate is fixed (or pegged) against another currency, such as the US dollar. • To maintain a fixed exchange rate, a government needs to have a significant level of foreign currency reserves, as it will need to actively intervene in the markets to keep it at the fixed rate.
Floating exchange rate system	• One currency is allowed to float freely in the market and find its own level. • In practice, many world currencies operate with a managed floating exchange rate system. In this, central banks intervene periodically in the foreign exchange market to influence the exchange rate in order to affect the balance of trade or to affect the domestic economy by making exports more competitive and imports more expensive, or vice versa.

Exchange rate changes can have a significant effect on the economy.

If a currency appreciates in value, this means that it is worth more in terms of a foreign currency. The effects of a rise in the exchange rate are that:

- exports become more expensive and so fewer goods will be exported
- imports become cheaper and so demand for imports increases
- **aggregate demand** falls, leading to lower growth, and
- inflation falls because of the effect of cheaper prices for imported goods, lower aggregate demand and less demand-pull inflation (see section 1.5.2 of this chapter).

The value of a currency can also falls in relative terms. In a floating exchange rate system this is referred to as 'depreciation' and in a fixed exchange rate system as 'devaluation'. The effect in both cases is a fall in the value of a currency. The effects of such a fall are as follows:

- more competitive exports, increasing demand for those goods
- more expensive imports, reducing demand for those goods
- higher economic growth and rising aggregate demand
- potential for rising inflation as increasing aggregate demand may cause demand-pull inflation, and imports are more expensive, causing cost-push inflation (see section 1.5.2 of this chapter). The actual impact will depend on other factors, however, such as spare capacity in the economy and the extent to which firms pass on increased import costs, and
- an improvement in the current account balance of payments.

1.4.3 International Trade

International trade is the exchange of goods and services between countries. It benefits participating countries through:

- **Specialisation** – economies of scale in the production of a particular good or provision of a particular service can be exploited. Increased production levels can take advantage of particular skills possessed by the labour force, known as the division of labour.
- **Competition** – global competition in the provision of goods and services results in improved choice and quality of products as well as more competitive prices and productivity improvements in the industries concerned.

Law of Comparative Advantage

- Even though one country may have an absolute production cost advantage over another country, there is still scope for both to collectively benefit from international trade if each specialises solely in the provision of the good or service where they have a comparative cost advantage.
- If both countries specialise in production of goods and services where their respective comparative advantage is greatest, both can be shown to be better off in terms of the positive impact this specialisation and trade has on their respective GDPs.

Despite the substantial benefits of conducting international trade free from any governmental interference, governments often engage in protectionism, or the erection of trade barriers, in the belief that certain domestic industries should be protected against global competition.

This usually results in some sort of trade retaliation, as has been seen in the ongoing 'tit-for-tat' measures taken by the US and China in their ongoing dispute over trade. The General Agreement on Tariffs and Trade (GATT) of 1948, which created an international trade organisation with responsibility for liberalising international trade, a role since assumed by the World Trade Organisation (WTO), is aimed at reducing barriers to free trade.

1.4.4 International Competitiveness

In an economy, where international trade accounts for a significant share of GDP, having the 'right' exchange rate is imperative to a country's international competitiveness.

The overall effect of a change in the exchange rate on the trade balance, assuming that demand is price elastic and all other factors (such as productivity) are held constant, is as follows:

- A **rise** in the nominal value of the currency will reduce a trade surplus or worsen a trade deficit as exports will be less competitive, unless exporters reduce their prices; whereas imports will be more competitive, unless exporters to that country raise their prices.
- A **fall** in the nominal value of the currency will increase a trade surplus or reduce a trade deficit as exports will be more competitive, unless exporters raise their prices; whereas imports will be less competitive, unless exporters to that country reduce their prices.

This is subject to any government intervention to affect the level of imports or exports.

By taking account of whether exporters and importers alter their prices when faced with a change in the nominal exchange rate, we can establish whether a country's overall international competitiveness has improved or declined.

Real Exchange Rates

One way of establishing international competitiveness is by calculating the real exchange rate. For example, India's real exchange rate relative to that of the US can be formally stated as:

$$\text{Real exchange rate} = \frac{\text{Indian price level}}{\text{US price level}} \times \frac{\text{US\$}}{\text{INR}}$$

A rising real exchange rate signifies a reduction in international competitiveness. If India's inflation is rising at a faster rate than in the US without a compensating weakening of the nominal exchange rate, for example, then India's international competitiveness declines. The precise effect on the trade balance and the revenues of importing and exporting firms will of course also depend on factors such as the price elasticity of these internationally traded goods and services, any productivity improvements in those industries and the speed with which consumers substitute goods and services when faced with a change in price.

As consumers are typically slow to change their spending patterns when faced with changing prices, the impact of a change in the real exchange rate on the trade balance is never instantaneous. In fact, a weakening of the nominal exchange rate will immediately raise import prices while reducing export

prices, thereby worsening the trade balance. However, once consumers adjust to these new relative prices, the trade balance should improve. The trade balance, therefore, tends to experience a J-curve effect – so called because if plotted on a graph (with time on the x-axis and trade balance on the y-axis), then the shape of the curve resembles the letter 'J'.

1.5 Unemployment and Inflation

Learning Objective

5.1.7 Know how inflation/deflation and unemployment statistics are determined

5.1.8 Know the concept of nominal and real returns

Inflation is the rate of increase in prices over a given period of time. Another way of putting this is a measure of the erosion in the purchasing power of money.

In most countries, the official level of inflation is worked out on a basket of goods by a government agency. However, that basket of goods is not relevant to everyone. It is also important to understand the large contributors to inflation, such as the price of oil, petrol and food. Motorists may face a greater level of inflation (and indirect tax) when petrol prices rise, while cyclists may benefit from a fall in metal prices, lowering the price of bikes.

Controlling inflation is the prime focus of economic policy in most countries, as the economic costs that inflation imposes on society are far-reaching, for the following reasons:

- It hinders the ability of the price mechanism to clear markets (ie, reducing prices to be able to sell outstanding stock).
- It reduces spending power – eg, $1 of goods ten years ago is not worth $1 of goods today.
- Individuals are not rewarded for saving, as borrowers gain at the expense of savers. Inflation tends to depreciate the value of debt, whereas the savings reduce in spending power.

It is important to understand, when advising clients, that inflation affects people in different ways – this is due to various factors such as spending habits, investment choices, and levels of debt and savings.

1.5.1 Real Returns

This damage to savings/returns occurs when the inflation rate exceeds the nominal interest rate (ie, when the real interest rate is negative). The nominal rate of interest is the rate earned on an investment; for example, the flat yield on a bond. The real rate of interest equals the nominal rate minus inflation.

When the real interest rate is negative:

- It creates uncertainty, leading to firms deferring investment decisions and consumers deferring spending decisions.
- Time is spent guarding against inflation, rather than being devoted to more productive means.
- Exported goods and services become less competitive internationally.

When assessing the costs of inflation, it is important to distinguish between inflation that can and cannot be anticipated. If inflation can be fully anticipated by society, then its costs can be minimised.

When talking about returns, especially with clients, it is important to be able to show the projected expected returns of their investments in absolute returns (nominal) and relative returns (real – taking account of inflation). One of the biggest fears for investors over the long term is that their savings/returns will get eroded by inflation. Therefore, when developing a long-term saving plan (eg, retirement), financial advisers must factor in an inflation rate over the saving period. Therefore, clients should get an idea of how much they need to save to get an expected final value in both absolute and real terms. Hence, advisors must always assume a rate of inflation, thereby lowering expected real returns.

1.5.2 Types and Measures of Inflation

Inflation is typically categorised into two types:

- **Cost-push inflation** – if firms face increased costs and inelastic demand for their output, the likelihood is that these rising costs will be passed on to the end consumer. Consumers will, in turn, demand higher wages from firms, causing a wage price spiral to develop. This was the case in 2022, when global supply chain disruptions and the energy price spikes (caused by geopolitical tensions, particularly the Russia/Ukraine conflict) led to significant increases in production costs; these costs were subsequently passed onto consumers in the form of higher prices for goods and services.
- **Demand-pull inflation** – when the economy is operating beyond its full employment level, prices are pulled up as a result of an inflationary gap emerging. This excess demand can often stem from the optimism that accompanies rising asset prices but has resulted, on innumerable occasions, from politically inspired tax cuts. A recent example was observed in 2021-22, when many economies experienced a surge in consumer demand as they emerged from COVID-19 lockdowns. Stimulus payments (ie, government payments to taxpayers designed to boost their spending power and spur economic activity), pent-up savings and low interest rates fuelled significant consumer spending; however, supply chains were still recovering from pandemic disruptions, leading to a mismatch between high demand and limited supply. This imbalance resulted in higher prices across various sectors.

Inflation can be measured in several ways. However, the two most widely monitored are retail prices and producer prices:

Retail Prices	• Changes in retail prices are most commonly measured using the consumer price index (CPI), which tracks changes in the prices of consumer goods and services purchased by households. • Countries may also have their own inflation measures tailored to their specific economic circumstances and policy objectives – for example, the retail price index (RPI) in the UK, and the Consumer Price Index for All Urban Consumers (CPI-U) in the US. Price data for a sample of goods is collected, and the amount spent on each good or service is weighted to create a basket of goods which can then be tracked.

Producer Prices	• Changes in the selling prices of goods and services over time are measured using the producer price index (PPI). • Also known as factory gate or wholesale inflation, PPI measures price changes from the seller's perspective, while CPI measures it from the purchaser's perspective. • PPI can serve as an early indicator of inflationary pressures in the economy before they reach the consumer.

1.5.3 Deflation, Disinflation and Stagflation

By contrast, deflation is defined as a general fall in price levels. Although not experienced as a worldwide phenomenon since the 1930s, deflation has generally been in evidence since the 1990s until recent years in countries such as Japan. It typically results from negative demand shocks, such as the recent global financial crisis and the COVID-19 pandemic, and from excess capacity and production. It can create a vicious circle of reduced spending and a reluctance to borrow, as the real burden of debt rises, called a deflationary spiral.

Disinflation is an intermediate state, namely where there is a reducing rate of inflation. Governments may want such periods in order to bring inflation back into an acceptable range. It should be noted that falling prices are not necessarily a destructive force per se and, indeed, can be beneficial if they are as a result of positive supply shocks, such as rising productivity and greater price competition, caused by the globalisation of the world economy and increased price transparency. An example can be seen with the general fall in clothing prices due to manufacturing that was traditionally carried out in more developed economies being outsourced to countries such as China and Vietnam, where labour is abundant and far cheaper.

Stagflation is when inflation is combined with a slow-to-negative economic growth, resulting in rising unemployment and possibly recession. This was seen during the 1970s when world oil prices rose dramatically and resulted not just in sharp rises in inflation in developed countries, but also in reduced economic activity.

1.5.4 Unemployment

Another problem with the negative effects of inflation, which can come about due to a mispricing of labour, is unemployment. There are many other reasons why unemployment exists. and they are categorised as:

- **Cyclical unemployment** – unemployment due to a period of negative economic growth, or economic slowdown.
- **Structural unemployment** – long-lasting unemployment that arises as a result of the changing nature of the economy where certain skills in particular sectors of the economy become redundant. Types of structural unemployment include:
  - **Keynesian unemployment** – structural unemployment on a national scale as a result of a drop in aggregate demand, causing unemployment in manufacturers and service providers.

- **Regional/geographical unemployment** – occurs in certain areas of an economy. Regional differences are often exacerbated by geographical immobilities, and a lack of skills and flexibility among the unemployed.
- **Technological unemployment** – when developments in technology and working practices cause some workers to lose their jobs.

- **Frictional unemployment** – the result of voluntary employment transitions, such as workers moving from one job to another.
- **Classical unemployment** – when wages are priced too high.
- **Seasonal unemployment** – where people are employed only for certain parts of the year.

An important concept to understand is that there is a natural rate of unemployment in every economy. This is the rate of unemployment in the economy when the labour market is in **equilibrium**, so that all those who want a job can get one, and any unemployment is purely voluntary. This natural or voluntary rate of unemployment, therefore, includes structural, frictional, classical and seasonal unemployment.

1.6 Fiscal and Monetary Policy

Learning Objective

5.1.4 Know the nature, determination and measurement of the money supply and the factors that affect it including Modern Monetary Theory (MMT)

5.1.6 Know the role, basis and framework within which monetary and fiscal policies operate: government spending; government borrowing; private sector investment; private sector spending; taxation; interest rates; inflation; currency revaluation/exchange rates/purchasing power parity; quantitative easing

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Governments can use a variety of policies when attempting to reduce the impact of short-term cyclical fluctuations in economic activity. Collectively, these measures are known as stabilisation policies and are categorised under the broad headings of **fiscal policy** and monetary policy.

Most governments adopt a pragmatic approach to controlling the level of economic activity through a combination of fiscal and monetary policies. Governments will use fiscal policy to set their objectives on borrowing, spending and taxation, and monetary policy to control the supply and cost of money.

In an increasingly integrated world, however, controlling the level of activity in an open economy in isolation is difficult, as international financial markets, rather than individual governments and central banks, tend to dictate economic policy.

1.7 Fiscal Policy

Fiscal policy (or demand management) refers to government policy that attempts to influence the direction of the economy through changes in borrowing, spending and taxation. This economic theory was made popular by English economist John Maynard Keynes as a way to control the high levels of unemployment experienced after the Great Depression and the Wall Street Crash of 1929. At that time, fiscal policy challenged the contention that free markets automatically provide full employment.

In using fiscal policy, governments aim to influence:

- aggregate demand and the level of economic activity
- the pattern of resource allocation, and
- the distribution of income.

Fiscal policy takes two forms:

- A discretionary, or proactive, approach is deliberately implemented to either:
  - Boost demand, known as an **expansionary stance**. This involves the government increasing government spending to stimulate economic activity, and funding this through borrowing to create a larger budget deficit.
  - Restrain demand, known as a **contractionary or restrictive fiscal policy**. This is where a government seeks to reduce the level of economic activity by increasing taxes or reducing government spending.
- A passive approach is one whereby spending (on items such as social security or welfare payments) automatically increases and tax revenue decreases as the economic cycle moves into its recessionary phase. These are known as automatic or built-in stabilisers.

As well as expansionary or contractionary, fiscal policy can also be **neutral**. A neutral stance implies that the government operating a balanced budget where spending is fully funded by tax revenues and where the overall effect of the budget is to have a neutral effect on the economy.

There are, however, three practical problems associated with fiscal policy:

- **Time lags** – the length of time that elapses between recognising the need for action (based on economic data that is itself time-lagged), implementing the appropriate policy and the policy impacting the economy can be considerable. If old data is used (so that it takes time for economic policy to effect change). This can have a destabilising influence, especially when used excessively.
- **Crowding out** – the rise in public sector spending drives down or can eliminate private sector borrowing or spending if an expansionary fiscal policy is financed through borrowing; this borrowing will increase the market rate of interest to the detriment of that element of business investment and some consumer spending that would have been undertaken at the lower interest rate.
- **Higher future tax rates** – pursuing an expansionary fiscal policy may result in a higher future tax burden being imposed on the economy. Instead of slowing the economy down, this can in fact cause inflation by people/labour demanding higher wages.

Another risk of fiscal policy is that, once expansionary legislative and tax changes have become law, they are politically difficult to reverse – it will be difficult to turn off the fiscal taps once they are turned on, leading to out-of-control inflation. Once inflation takes hold, history shows that if not checked, it can quickly run out of control and be very economically damaging. But moving from stimulus to austerity, especially at speed, is difficult due to the long-term nature of many fiscal commitments and public resistance.

Further, consumers may not respond in the intended way to fiscal stimulus (eg, they may save rather than spend a tax cut). It is therefore easy to understand why monetary policy is generally viewed as the first line of defence in stabilising the economy during a downturn – see section 1.8 for more information on monetary policy.

Taxation

A tax is a financial charge or levy imposed upon a taxpayer (an individual or legal entity) by a state or the functional equivalent of a state to fund various public expenditures. In the majority of countries, a failure to pay, an evasion of, or resistance to, taxation is usually punishable by law.

Taxes consist of direct or indirect taxes. The meaning of these terms can vary in different contexts, which can sometimes lead to confusion. One economic definition states that:

'*Direct taxes may be adjusted to the individual characteristics of the taxpayer, whereas indirect taxes are levied on transactions irrespective of the circumstances of buyer or seller*'.

According to that definition, for example, income tax is direct, whereas sales tax is indirect.

- Direct tax is levied on income or wealth, eg, income tax.
- Indirect tax is levied on expenditure, eg, VAT.
- Ad valorem indirect tax is levied as a percentage of expenditure, eg, VAT at 20%.
- Specific indirect tax is levied as a fixed amount per unit, eg, taxes on petrol.
- Regressive tax is where the proportion of tax decreases as income, wealth or expenditure rises.
- Progressive tax is where the proportion of tax increases as income, wealth or expenditure rises.
- Proportional tax is where the proportion of tax paid is the same regardless of income, wealth or expenditure.

1.8 Monetary Policy

Monetary policy refers to the actions that a country's central bank or government can take to influence how much money is in the economy and how much it costs to borrow. In simple terms, it aims to achieve some balance between inflation and output stabilisation, thus economic growth and stability. This is because, in the short run (anything from three to five years), changes in the money supply can affect the actual production of goods and services. Hence monetary policy is a meaningful policy tool for achieving both inflation and growth objectives.

The principle underlying monetary policy is the relationship between the price at which money can be borrowed (ie, interest rates) and the total supply of money. Monetary policy uses a range of tools to control one or both of these (including setting interest rates, adjusting the size of the monetary base and setting bank reserve requirements), which has the effect of either increasing or contracting the money supply. Monetary policy is referred to as contractionary if it reduces the size of the money supply or raises interest rates (the cost of money increases and so less is demanded), and as expansionary if it increases the size of the money supply or decreases the interest rates.

Example

In a recession, consumers stop spending as much as they used to; business production declines, leading firms tend to lay off workers and stop investing in new capacity; and foreign appetite for the country's exports may also fall. In short, there is a decline in overall, or aggregate, demand to which government can respond with a policy that leans against the direction in which the economy is headed. Monetary policy is often used as that counter cyclical tool.

Such a counter-cyclical policy should lead to the desired expansion of output and employment, but, because it entails an increase in the money supply, could also result in an increase in prices. As an economy gets closer to producing at full capacity, increasing demand will put pressure on input costs, including wages. Workers then use their increased income to buy more goods and services, further bidding up prices and wages, and pushing generalised inflation upward – an outcome policymakers usually want to avoid. Monetary policy, therefore, must balance price and output objectives. Monetary policy is not the only tool for managing aggregate demand for goods and services (see the section on fiscal policy, above); and in fact, monetary control has never proved totally effective when used in isolation.

Although the central bank can influence the supply of money through interest rate setting, open market operations and changes to the **reserve ratio**, its impact can be limited. To compound this, the velocity of circulation of money (ie, the number of times currency passes through different hands, or the demand for money) is not stable or predictable in the short run. This is mainly as a result of financial innovation, deregulation and structural changes in financial markets, as well as changes in the rate of inflation and rate of interest. Therefore, changes in the money supply do not directly translate into changes in the price level.

Monetary policy, therefore, must balance price and output objectives. Monetary policy is not the only tool for managing aggregate demand for goods and services. Fiscal policy – taxing and spending – is another, and governments have used it extensively during the recent global crisis. However, it typically takes time to legislate tax and spending changes, and once such changes have become law, they are politically difficult to reverse. Add to that concerns that consumers may not respond in the intended way to fiscal stimulus (for example, they may save rather than spend a tax cut), and it is easy to understand why monetary policy is generally viewed as the first line of defence in stabilising the economy during a downturn.

Control of the money supply is seen as an important tool for economic management by most governments following a **monetarist** agenda (the Chicago school of monetarism believes in a link between the money supply and inflation). Central banks attempt to control the money supply through a variety of monetary policy measures, which ultimately control:

- the supply of money
- the availability of money, and
- the cost of money or rate of interest.

We will look at each of these in turn in the sections below.

As with fiscal policy, there are some practical problems associated with monetary policy, including defining what constitutes the money supply, and controlling the money supply. Further, considerable time lags exist between recognising the need for action and the implementation of policy having an effect on the economy; these time lags can be up to 12 months. That said, monetary control has never proved totally effective when used in isolation.

1.8.1 The Money Supply

The money supply is the amount of money that exists in the economy at any point in time. Before money supply can be quantified, however, the term 'money' itself needs to be defined.

'Money' is anything that is generally acceptable as a means of settling a debt and is an acceptable medium of exchange. It must also act as a store of value for future consumption by maintaining its purchasing power and provide a unit of account against which the price of goods and services can be compared. (Cryptocurrencies, therefore, are not money because they are not widely accepted.)

To be acceptable, however, money must also be easily recognisable, divisible, portable and durable. In a developed economy, money takes the form of a **fiat currency** – that is, currency that has no intrinsic value, but which is demanded for what it can itself purchase.

Fiat Currency

Fiat is the Latin word for 'it shall be'.

A fiat currency (also called 'fiat money' or 'physical money') has no intrinsic value and has no backing from a physical asset in a vault; rather, their value is derived from the backing by the government which declares it to be 'legal tender' (ie, it is accepted as having value because the government says it has, and people trust the government enough to accept it).

Thus, if people lose faith in a nation's paper currency, like the dollar bill, the money will no longer hold any value.

Historically, governments would mint coins out of a physical commodity such as gold or silver, or would print paper money that could be redeemed for a set amount of physical commodity. Today, most modern paper currencies are fiat currencies. The value of fiat money is derived from the relationship between supply and demand, rather than the value of the material that the money is made of.

Subclassifications of Money

Measuring the money supply is regarded as vital as, if the money supply is growing faster than the rate that output and income are growing, then this could result in inflation and a fall in individual standards of living. That is called the velocity of money – ie, the amount of times it changes hands, and a more in-depth understanding can be found by reading about the **Quantity Theory of Money** by Irving Fisher.

Over time, many measures have been developed, but two of the most commonly quoted ones are:

- **Narrow money** – this represents the monetary base. It is made up of notes and coins in circulation plus overnight deposits.
- **Broad money** – this is the broader measure of the money supply. It consists of narrow money plus bank deposits and money market instruments.

What should be included in any measurement of the money supply varies depending upon what is being examined and from country to country.

Examples of Money Supply Measures	
US	• The two measures of money supply are M1 and M2. • M1, the narrowest measure, covers most liquid forms of money: currency, demand deposits and other deposits against which cheques can be written. • M2, the broadest measure, is defined as M1 plus savings accounts, time deposits below $100,000, and balances in retail money market mutual • funds.
Eurozone	• The European Central Bank (ECB)'s definitions of euro-area monetary aggregates are M1, M2 and M3. • M1 (narrow money), includes currency in circulation and overnight deposits. • M2 (intermediate money), comprises M1 plus deposits with agreed maturities of up to two years, and deposits redeemable at notice of up to three months. • M3 (broad money), comprises M2 plus **repo** agreements, money market funds and debt securities of up to two years.
UK	• There are two main measures: M0 and M4. • M0, the narrowest measure, is the monetary base. It only contains notes and coins in circulation and banks' operational deposits at the Bank of England (BoE). • M4, the broadest measure, is defined as M0 plus bank and building society deposits.

Credit Creation and the Multiplier Effect

The definition of the money supply is further complicated by the existence of two features known as **credit creation** and the money **multiplier**. This is best explained by recognising that banks are only required to hold a small proportion of their deposits as reserves to meet day-to-day withdrawals, something known as the **reserve ratio**. They can lend out the significant remainder, as long as they meet the reserve requirements set by each country's central bank. As a sizeable proportion of each loan made from bank deposits is re-deposited at the central bank and then extended as another loan, so credit is created and the money supply expands.

1.8.2 The Availability of Money

The money supply is influenced by several factors. These include:

- **Reserve requirements** – the amounts that commercial banks are required to hold as deposits at the central bank, expressed as a percentage of the commercial bank's liabilities. An increase in reserve requirements forces banks to hold greater balances at the central bank and so reduces their ability to lend and affects the amount of money in circulation and vice versa where reserve requirements are reduced.

- **Bank rate** – central banks act as banker to the banks and lender of last resort to the banking system. Central banks provide lending facilities to commercial banks, which they can use to manage their cash flows and which the central bank can use to influence the cost of money. The interest rate charged is known as the bank rate, **discount rate** or some similar term. In both the US and the UK, this lending facility is often referred to as the discount window.
- **Government bond issues** – when the government issues bonds, it borrows money from the public. This can affect the money supply by changing the amount of money that is available for banks to lend. If the central bank purchases these bonds, it injects money into the economy, thus increasing the money supply. Conversely, selling bonds can withdraw money from the economy, thus decreasing the money supply.
- **Open market operations** – open market operations are a key tool used by central banks to regulate the money supply and manage economic stability. It involves the central bank buying or selling government securities in the open market. By buying securities, the central bank injects money into the banking system, increasing the money supply; selling securities has the opposite effect, as it removes money from the banking system, decreasing the money supply.

To bring this to life, we will look at an example of the federal funds rate in the US and how this influences interest rates.

Federal Funds Rate

In the US, the federal funds rate is the rate at which banks may borrow in the federal funds market, to ensure that they have enough reserves to meet their payments needs; to satisfy regulatory requirements, such as the minimum requirements for reserves and liquidity; and to receive the interest paid on reserve balances by the Fed. Movement in the federal funds target rate most closely affects other shorter-term interest rates, such as on three-month Treasury bills. It can also affect other interest rates in the economy, such as rates for consumer and business loans and longer-term debt.

The entity responsible for setting this rate is the Federal Open Market Committee (FOMC) – see section 2.2 for more information on the FOMC. If the FOMC decides to change the target range for the federal funds rate, its trading desk will place orders to buy or sell government securities to hit that target.

- When the trading desk purchases government securities, the Fed deposits funds into the bank accounts of the sellers. That payment becomes part of the reserve balances that commercial banks hold at the Fed; this increases the amount of funds that banks have available to lend. This injection of reserves into the banking system puts downward pressure on the federal funds rate, which then puts downward pressure on other interest rates and, therefore, encourages more borrowing throughout the economy.
- When the trading desk sells some of the government securities it holds, buyers pay from their bank accounts. This shrinks the funds that banks have available to lend. That creates upward pressure on the federal funds rate, since banks have fewer reserves available to lend and will charge more to lend them. As the federal funds rate increases, so do other rates. Individuals and businesses are then less likely to borrow, since it is more expensive, and may be more likely to save their money and earn that higher interest.

1.8.3 The Cost of Money

Under the monetarist economic theory, the control of money supply (and hence of interest rates) is critical in maintaining economic stability. Interest rate targets are a vital tool of monetary policy and are taken into account when dealing with variables like investment, inflation and unemployment.

Central banks generally tend to reduce interest rates when they wish to increase investment and consumption in the country's economy. However, low interest rates can be risky and may lead to the creation of inflationary trends or economic bubbles, in which large amounts of capital inflate asset prices (such as property and stock markets). Interest rate adjustments are thus made to keep inflation within a target range for the health of economic activities or to cap the interest rate concurrently with economic growth to safeguard economic momentum.

Do Markets or Central Banks Set Interest Rates?

Although setting the base rate is the outcome of a process of deliberation by the central bank, there is a market background to these deliberations. The central bank will be aware of the activities of traders and institutions in the money markets who are continually expressing a view on the appropriate level of interest rates and their future direction.

The opinions of millions of traders around the world about exchange rates, bond rates and prices for short-term money market instruments are based on their perception of the macroeconomic background and, specifically, about the outlook for GDP growth, employment and especially, for inflation.

If participants in the money markets are becoming apprehensive about the risk of inflation, they will be pushing up the rates required on making funds available to borrowers as they will want to be compensated by a real rate of return which will include a premium to cover the expected erosion of purchasing power due to inflation.

The term 'money market' or 'bond market vigilantes' describes the very powerful constituency of interests in the money markets which is constantly assessing cost pressures and inflation in general terms, based upon statistical data as to the future direction of global GDP growth, as well as the size of the premium to be paid in the calculation of the rate of interest for so-called 'inflation risk'.

Some institutional investors have expressed the view that central banks have lost, or are beginning to lose, their control over interest rates; and that when they set official rates, they are simply echoing the views of the market. One reason to doubt this hypothesis, however, is the fact that central bank deliberations are very closely monitored by the markets and central banks, and from time to time have shown their capacity to surprise markets with decisions on the exact levels of interest but also by other expressions of monetary policy.

Negative Interest Rate Policies

Some central banks have implemented negative interest rate policies to combat deflationary pressures.

Under a negative rate policy, financial institutions are required to pay interest for depositing excess reserves with the central bank; that is, any surplus beyond that which regulators say banks must keep on hand. That way, central banks penalise financial institutions for holding on to cash in the hope of prompting them to boost lending to businesses and consumers.

However, negative rates can lower bank profitability, encourage banks to take excessive risks in search of higher returns and may have limited effects on stimulating real investment and growth, whereas an expansionary fiscal policy might be more effective.

1.8.4 Quantitative Easing (QE) and Quantitative Tightening (QT)

The global financial crisis of 2007–08 saw many central banks resort to unconventional monetary policies to deal with the aftermath.

Following the global financial crisis, people and businesses hoarded money, instead of spending and investing. The result of this is normally a collapse in aggregate demand, which leads to prices falling further, a slowdown or halt in real production and output, and an increase in unemployment. A loose or expansionary monetary policy is usually employed to deal with such economic stagnation.

When a central bank is concerned about the risks of recession and very low inflation, it can cut the base rate to reduce the cost of money and provide a stimulus to the economy. The key difference in the recession that followed the global financial crisis was that interest rates were reduced massively by central banks in developed countries. When they are already close to zero, leaving no further room for rate cuts, then central banks need an alternative policy instrument.

QE was the policy instrument adopted by many central banks in the western world. This involves injecting money directly into the economy. The aim of QE was to get money flowing around the economy when the normal process of cutting interest rates was not working.

The way to do this was for central banks to buy assets in exchange for money. In theory, any assets can be bought from anybody. In practice, the focus is on buying securities (such as government debt, mortgage-backed securities (MBSs) or even equities) from banks. Injecting more money into the economy through the purchase of bonds can have a number of effects:

- The seller of the bonds ends up with more money so may spend it, which will help boost growth.
- Alternatively, they may buy other assets instead and, in doing so, boost prices and provide liquidity to other sectors of the economy, resulting in people feeling better off and therefore spending more.
- Buying assets means higher asset prices and lower yields, which brings down the cost of borrowing for businesses and households, encouraging a further boost to spending.
- Banks find themselves holding more reserves, which might lead them to boost their lending to consumers and business; again, borrowing increases and so does spending.

The theory behind the policy was that the extra money works its way through the economy, resulting in higher spending and, therefore, growth, or reducing the impact of recession and preventing the onset of a depression.

The opposite of QE is quantitative tightening (QT). Unlike QE, QT involves reducing the money supply by ceasing further purchases of securities or selling securities held under QE. This process is typically employed when central banks need to control inflation or prevent asset bubbles from forming. As the reduction in the money supply increases the cost of borrowing, then QT can lead to higher interest rates. However, implementing QT requires careful consideration, as it can also potentially slow economic growth and destabilise financial markets if not executed properly. Central banks therefore need to strike a balance between tightening monetary policy to control inflation and ensuring that the economy continues to grow at a sustainable pace, all the while the while effectively communicating their actions to the market in order to prevent uncertainty and market volatility.

1.8.5 Modern Monetary Theory (MMT)

More recently, the ideas of 'modern monetary theory' (MMT) are suggesting a rethink about monetary theory. Traditional monetary theory is based on the idea that a change in the money supply is the main driver of economic activity – if a nation's money supply increases, economic activity will increase and vice versa. MMT instead suggests that governments should not restrict spending to tackle an underperforming economy and instead should use fiscal policy to achieve an appropriate level of inflation alongside other broader economic objectives.

Its proposition that there should be a fundamental rethink about the role of debt for countries to deal with economic issues is gaining traction, especially as countries struggle to deal with the economic impact of the COVID-19 pandemic. One of its main tenets is that the public sector in a modern advanced economy should never face the need to default on its sovereign debt in its domestic currency, whatever the size of its outstanding debt or its budget deficit. This premise suggests that because a government theoretically has the ability to instruct its central bank to create more domestic currency, it can use this capability to service or repay any quantity of public bonds that have been issued. This would then enable a large fiscal expansion in order to meet economic objectives.

However, such a policy is not without risks. The main risk is that this policy may lead to out-of-control inflation. Once inflation takes hold, history shows that if not checked, it can quickly run out of control and be very economically damaging. Moving from stimulus to austerity, especially at speed, is difficult due to the long-term nature of many fiscal commitments and public resistance.

2. Central Banks

Learning Objective

5.1.5 Know the role of central banks

A central bank, reserve bank, or monetary authority is an institution that manages a state's currency, money supply and interest rates. Central banks also usually oversee the commercial banking system of their respective countries.

The primary function of a central bank is to control the nation's money supply, through active duties such as managing interest rates, setting the reserve requirement and acting as a lender of last resort to the banking sector during times of bank insolvency or financial crisis.

Through open market operations, a central bank influences the money supply in an economy. Each time it buys securities (such as a government bond or Treasury bill), it in effect creates money. The central bank exchanges money for the security, increasing the money supply while lowering the supply of the specific security. Conversely, the selling of securities by the central bank reduces the money supply.

Central banks usually also have supervisory powers, intended to prevent bank runs and to reduce the risk that commercial banks and other financial institutions engage in reckless or fraudulent behaviour. Central banks in most developed nations are institutionally designed to be independent from political interference. Still, limited control by the executive and legislative bodies usually exists, such as the appointment of the Governor of the Bank of England and Chairman of the Federal Reserve in the US.

As countries become more dependent on each other for trade and prosperity, the adverse effect of a crisis in one region quickly spreads around the world to affect the global economy. This then has a direct effect on the economies of any countries that are reliant upon it. As a result, since the global financial crisis, we have seen central banks working together (and in particular those of the G20) in coordinating policy responses to solving global economic problems.

The Financial Stability Board (FSB) promotes global financial stability by coordinating the development of regulatory, supervisory and other financial sector policies and conducts outreach to non-member countries. In its role, the FSB is tasked with regularly assessing vulnerabilities affecting the global financial system, supporting contingency planning for cross border crisis management relating to systemically important firms, and coordinating the activities of national financial authorities and standard setting bodies.

2.1 Role of Central Banks

Central banks operate at the very heart of a nation's financial system. Most are public bodies, although, increasingly, central banks operate independently of government control or political interference, although the heads can be political appointees.

They usually have the following responsibilities:

- acting as banker to the national banking system by accepting deposits from and lending to commercial banks
- acting as banker to the government
- managing the **national debt**, eg, issuing government bonds
- regulating the domestic banking system
- acting as lender of last resort to the banking system in financial crises to prevent the systemic collapse of the banking system
- setting the official short-term rate of interest
- controlling the money supply
- issuing notes and coins
- holding the nation's gold and foreign currency reserves to defend and influence the value of a nation's currency through intervention in the currency markets, and
- providing a depositors' protection scheme for bank deposits.

It is undoubtedly their role in the management of the economy and as lender of last resort to the banking system that has been most closely observed and discussed during the recent economic cycle.

Most central banks have a number of methods open to them to enable them to fulfil their role in management of the economy. The three main tools – interest rate setting, open market operations and reserve policy – are described in section 1.8.2 of this chapter.

2.2 Central Banks

Federal Reserve

The Federal Reserve System (also called the Federal Reserve or, simply, the Fed) dates back to 1913. It is comprised of 12 regional federal reserve banks, each of whom monitors the activities of, and provides liquidity to, the banks in its region.

Although free from political interference, the Fed is governed by a seven-strong board appointed by the President of the United States. This governing board, in addition to the presidents of five of the 12 federal reserve banks, makes up the Federal Open Market Committee (FOMC). The chairman of the FOMC, also appointed by the US President, takes responsibility for the Committee's decisions, which are directed towards the FOMC's statutory duty of promoting price stability and full employment, in other words, monetary policy.

The FOMC meets eight times a year (ie, about every six weeks) to examine the latest economic data and the many economic and financial indicators it monitors to gauge the health of the economy, in order to determine whether the economically sensitive fed funds rate should be altered. Very occasionally, it meets in an emergency session, as and when circumstances dictate.

As part of its monetary policy objectives, the FOMC considers employment and inflation: they seek to achieve maximum employment (ie, the level of employment where all individuals willing and able to work can find jobs), and inflation at an average rate of 2% over the long run. This target represents the desired annual rate of inflation that the Fed aims to achieve over the medium term. This target serves

as a benchmark for assessing the effectiveness of monetary policy in promoting price stability and supporting economic growth.

As lender of last resort to the US banking system, the Fed has rescued a number of US financial institutions and markets from collapse over the years, thus preventing widespread panic, or systemic risk, from spreading throughout the financial system by judicious use of the federal funds rate.

The European Central Bank (ECB)

Based in Frankfurt, the ECB assumed its central banking responsibilities upon the creation of the euro, on 1 January 1999. The euro has since been adopted by 19 of the European Union (EU)'s 27 member states, which have collectively created an economic region known as the eurozone (ie, an area consisting of EU member states that have adopted the euro as their currency).

The ECB is principally responsible for setting monetary policy for the entire eurozone, with the sole objective of maintaining internal price stability. Its objective of keeping inflation at 2%, as defined by the Harmonised Index of Consumer Prices (HICP), is achieved by making reference to factors such as the external value of the euro and growth in the money supply that may influence inflation.

The ECB sets its monetary policy through its president and council, the latter comprising the governors of each of the eurozone's national central banks.

Although the ECB acts independently of EU member governments when conducting monetary policy, it has on occasion succumbed to political persuasion. It was also one of the few central banks that generally did not act as a lender of last resort to the banking system. However, the sovereign debt crisis in Europe in 2011 saw that stance change and required it to provide significant support to European banks on both a short- and long-term basis.

Notably, the ECB's response to the COVID-19 pandemic differed from that of many of its peers. While several central banks worldwide opted to cut interest rates further, the ECB chose to concentrate on bolstering bank lending and expanding its asset purchase programme through QE. This strategy reflected the challenges facing the eurozone, where interest rates were already at historically low levels.

The Bank of Japan (BoJ)

Japan's central bank has a statutory duty to maintain price stability. It is also responsible for the country's monetary policy, issuing and managing the external value of the Japanese yen, and acting as lender of last resort to the Japanese banking system.

The basic stance for monetary policy is decided by the Policy Board at monetary policy meetings (MPMs). At MPMs, the Policy Board discusses the economic and financial situation, decides the guideline for money market operations and the BoJ's monetary policy stance for the immediate future, and announces decisions immediately after the meeting concerned. Based on the guideline, the BoJ sets the amount of daily money market operations and chooses types of operational instruments, and provides and absorbs funds in the market.

The Bank of England (BoE)

The UK's central bank, the **Bank of England (BoE)**, was founded in 1694, but it was not until 1997 that the BoE gained operational independence in setting monetary policy, in line with most other developed nations, when the BoE's Monetary Policy Committee (MPC) was established. The process had previously been subject to political interference.

The BoE has two core purposes:

- **Monetary stability** means stable prices and confidence in the currency. Stable prices involve meeting the government's inflation target.
- **Financial stability** refers to detecting and reducing threats to the financial system as a whole. A sound and stable financial system is important in its own right, and vital to the efficient conduct of monetary policy.

The MPC's primary focus is to ensure inflation is kept within a government-set target. It does this by setting the base rate, which, since November 2003, has been a rolling two-year target of 2% for the CPI; this is the UK's administratively set short-term interest rate, and is the MPC's main policy instrument. At its monthly meetings, it must gauge all of the factors that can influence the measure of inflation it uses over both the short and medium term. These include the level of the exchange rate, the rate at which the economy is growing, how much consumers are borrowing and spending, wage inflation, and any changes to government spending and taxation plans.

The People's Bank of China (PBC, PBoC or PBOC)

The PBC is the Chinese central bank. It is responsible for designing and implementing monetary policy and for ensuring financial stability, and for managing China's significant foreign reserves and gold reserves. It has a monetary policy objective to maintain the stability of the value of the currency and thereby promote economic growth. Policy is determined by a monetary policy committee.

Operating under state ownership and funding, the PBC's independence has long been subject to scrutiny. That said, over the years, efforts have been made to enhance communication with financial markets.

Bank of Canada

The Bank of Canada is the nation's central bank, and its objective is 'to promote the economic and financial welfare of Canada'. It was established in 1934 as a privately-owned corporation and became a Crown corporation belonging to the federal government in 1938, although it conducts its activities with considerable independence compared to most other federal institutions.

3. Microeconomic Theory

Microeconomics views the economy from the standpoint of how individuals and firms allocate their limited resources in order to maximise an individual's financial position or the production, profitability and growth of a firm. It seeks to analyse certain aspects of human behaviour in order to show how individuals and firms respond to changes in price and why they demand what they do at particular price levels.

3.1 The Interaction of Demand and Supply

Learning Objective

5.2.1 Know how price is determined and the interaction of supply and demand: supply curve; demand curve; reasons for shifts in curves; elasticity of demand; change in price; change in demand

Price and output in the free market are determined by the interaction of the demand for goods and services from individuals and the supply of production from firms.

This can be readily understood by considering that you only have limited resources available to spend and have to make choices as to where you spend those resources. For an individual, these scarce resources include time, money and skills. At a national level, the same principle applies, and scarce resources include natural resources, land, labour, capital and technology.

The relationship between supply and demand underlies how resources are allocated and the economic theories of demand and supply seek to explain how these resources are allocated in the most efficient manner. As a result, we will look next at the law of demand and the law of supply.

3.1.1 The Demand Curve

Demand refers to the quantity of a product that people are prepared to buy at a certain price. The relationship between price and the quantity demanded is known as the demand relationship.

The law of demand states that, if all other factors remain equal, then the higher the price of a product, the less it will be demanded. The rationale behind this is that theoretically, people will buy less of a product as the price rises, as it will force them to forgo the consumption of something else (as we will see in section 3.2, this is not necessarily the case in practice!).

The diagram below shows the **demand curve**, which represents the quantity of a particular good that consumers will buy at a given price.

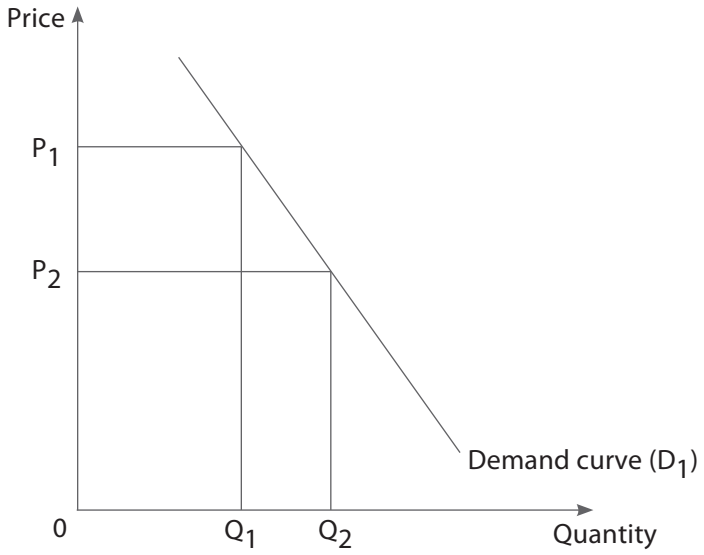


Figure 1: The Demand Curve

Although it is referred to as a demand curve, you will see that it is depicted as a negatively sloped straight line. This depicts the inverse relationship between the price of a good and the amount demanded. The point where price P1 and quantity Q1 intersects on the curve represents the demand for the product. The point where P2 and Q2 intersect illustrates that more of the product will be demanded if the price is lower. The converse would also be true if the price were to rise.

A change in the price of a good, then, generates movement along the demand curve.

Changes in the demand curve can also take place as a result of something other than price, and will result in a shift in the demand curve to the right or left as a greater or lesser quantity of the good is demanded. This is shown in Figure 2.

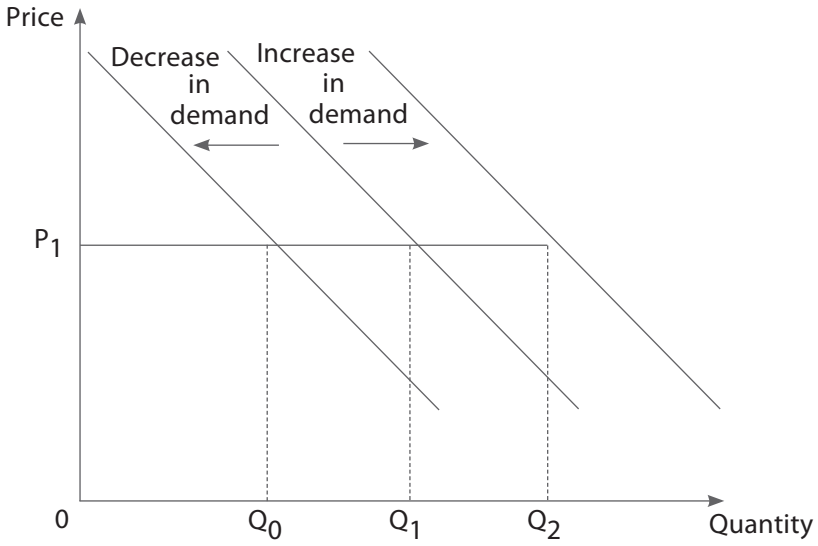


Figure 2: Shifts in the Demand Curve

Such parallel shifts can result from the following:

- **The price of other goods changing** – the direction of the shift depends on whether these other goods are **substitutes** that may be purchased instead, or **complementary** goods that are typically purchased in conjunction with a particular product.
- **Growth in consumers' income –** a rise in income should result in increased demand for the good at each price level (ie, in the demand curve shifting to the right), assuming the good is a normal one (ie, luxury goods and some day-to-day necessities). However, if the good is an inferior one (ie, its demand drops when income rises), then the demand curve will shift to the left in response to consumers moving away from this product to another more desirable, or more innovative, product.
- **Changing consumer tastes –** this can also result in the demand curve shifting to either the left or right depending on whether or not the product is currently fashionable.

3.1.2 The Supply Curve

Supply refers to the amount of a good that producers are willing to supply when receiving a certain price. This supply relationship is demonstrated in the **supply curve**, which is shown below.

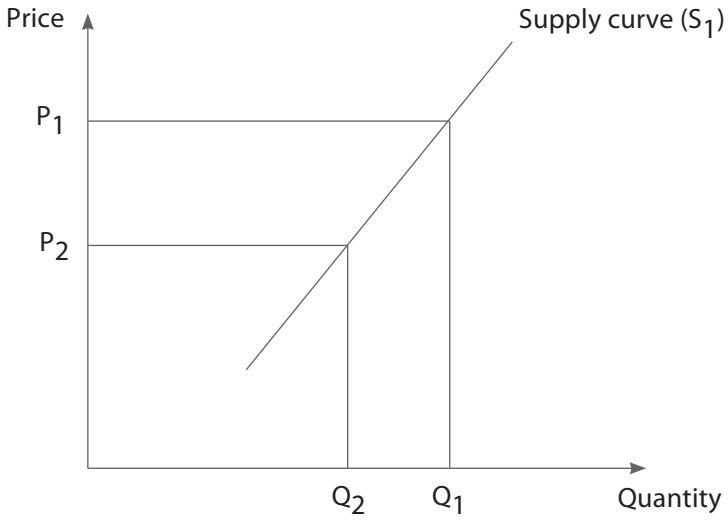


Figure 3: The Supply Curve

The supply relationship shows an upward slope, reflecting that the higher the price at which the producer can sell a product, the more they will supply, as selling at a higher price will generate increased revenues.

Movement along the supply curve results in a greater quantity being supplied, the higher the price. However, once again, a change in anything other than a change in the price of the good could result in the supply curve shifting to either the left or right.

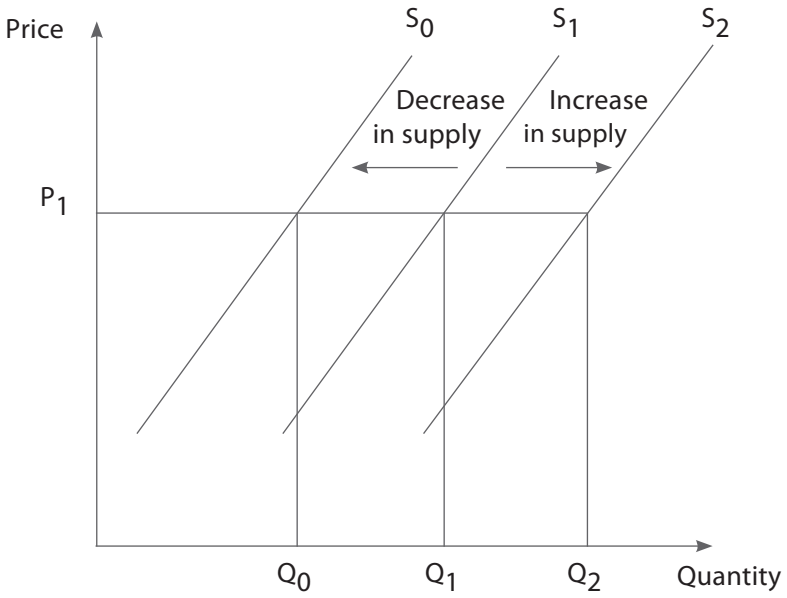


Figure 4: Shifts in the Supply Curve

For instance, an increase in the cost of production resulting from rising resource prices will see the supply curve shift to the left. Conversely, a more efficient production process, resulting from utilising new production technology, or increased competition from new firms entering the industry, will shift the curve to the right.

Unlike the demand curve, however, the supply relationship is heavily influenced by time, as producers cannot react quickly to changes in demand or price.

3.1.3 Equilibrium

The interaction of demand and supply will determine the quantity of the good and the price at which it is to be supplied. This result is known as reaching a state of equilibrium, as shown in Figure 5.

At this point, demand and supply are equal, with output Q_1 being produced at price P_1. P_1 is known as the market clearing price. For example, if output Q_2 had been produced rather than Q_1, insufficient demand for these goods at price P_2 would have resulted in the building up of surplus stocks. Production would have contracted until the price of these unsold stocks had been forced down to the market clearing price of P_1.

Whether the goods in question are doughnuts or derivatives, when a market is allowed to operate freely, the price mechanism always brings supply and demand back into equilibrium. This is known as Say's Law: supply creates its own demand. You need look no further than your local fruit and vegetable market to see the free market at its most efficient, with transparent pricing reflecting supply and demand.

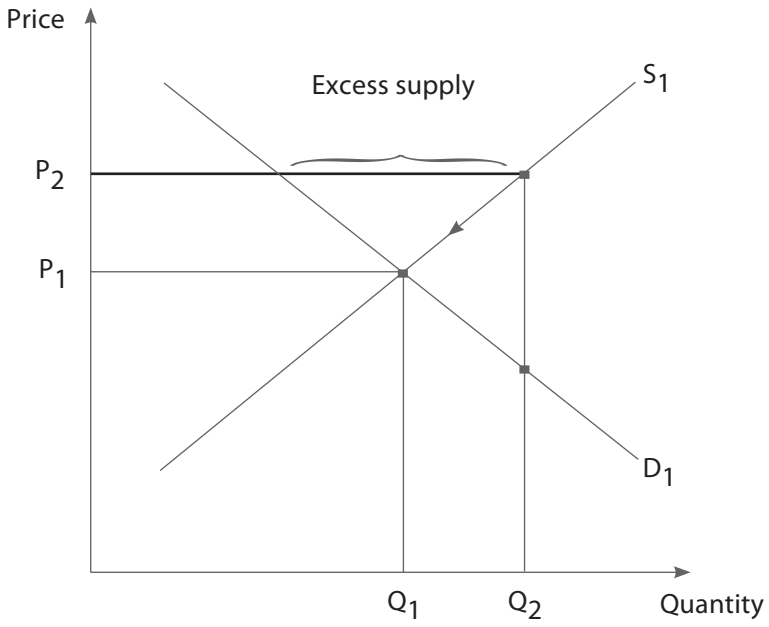


Figure 5: Equilibrium

3.2 Elasticity of Demand

The demand curve we have looked at so far suggests that demand will change in proportion to changes in the price. In practice, this is not the case, as some goods are more essential to a consumer than others, and so demand can be insensitive to price changes (Giffen goods), as consumers will still need to buy the product. 'Ostentatious' goods, such as high-end fashion brands and luxury watches, can fall into this category as well. Conversely, other goods are less of a necessity and an increase in price will deter consumers from buying.

Economics seeks to explain this relationship by referring to the degree with which a demand or supply curve reacts to a change in price as the curve's elasticity.

A product is said to be highly elastic if a slight change in price leads to a sharp change in the quantity demanded or supplied, such as luxury goods. At the other end of the spectrum, a product is said to be inelastic where changes in price bring about only modest changes in the quantity demanded or supplied, as with products that are a necessity such as food and heating.

There are three types of elasticity that we need to consider: price, cross and **income elasticity of demand (YED)**. We will look at each of these in the sections below.

3.2.1 Price Elasticity of Demand (PED)

One of the most important factors affecting the demand for a good is price. The **price elasticity of demand (PED)** quantifies the extent to which the demand for a particular good change in proportion to small changes in its price. It is calculated as follows:

$$\text{PED} = \frac{\text{Percentage change in the quantity demanded}}{\text{Percentage change in the price}}$$

By knowing the PED of a product, firms are able to calculate the impact that a small price rise or price reduction will have on the total revenue generated by the product.

Example

A gadget is priced at $2, and 1,000 units are sold. If, however, the price is reduced to $1.90 per unit, 1,200 units would be sold. A 5% reduction in price, therefore, results in a 20% increase in the volume of sales, thereby increasing total sales revenue from $2,000 (1,000 units x $2) to $2,280 (1,200 units x $1.90).

The PED of the gadget, therefore, is +20% / -5% = -4. This tells us that for a 5% reduction in price, the quantity demanded will increase at four times the rate.

Demand is said to be elastic if a 1% rise in price brings about a contraction in demand of more than 1%. If a 1% change in price brings about less than a 1% change in demand, then demand is said to be inelastic. Unit elasticity takes place when demand and price changes are in equal proportions. As previously stated, luxury goods tend to be in relatively elastic demand whilst necessities follow a pattern of inelastic demand.

Demand curves are rarely elastic or inelastic across their entire length. As you move down the demand curve, successive price decreases result in a diminishing increase in sales and slow the rate at which total revenue increases. Total revenue is maximised at the point of unit elasticity, as demonstrated below:

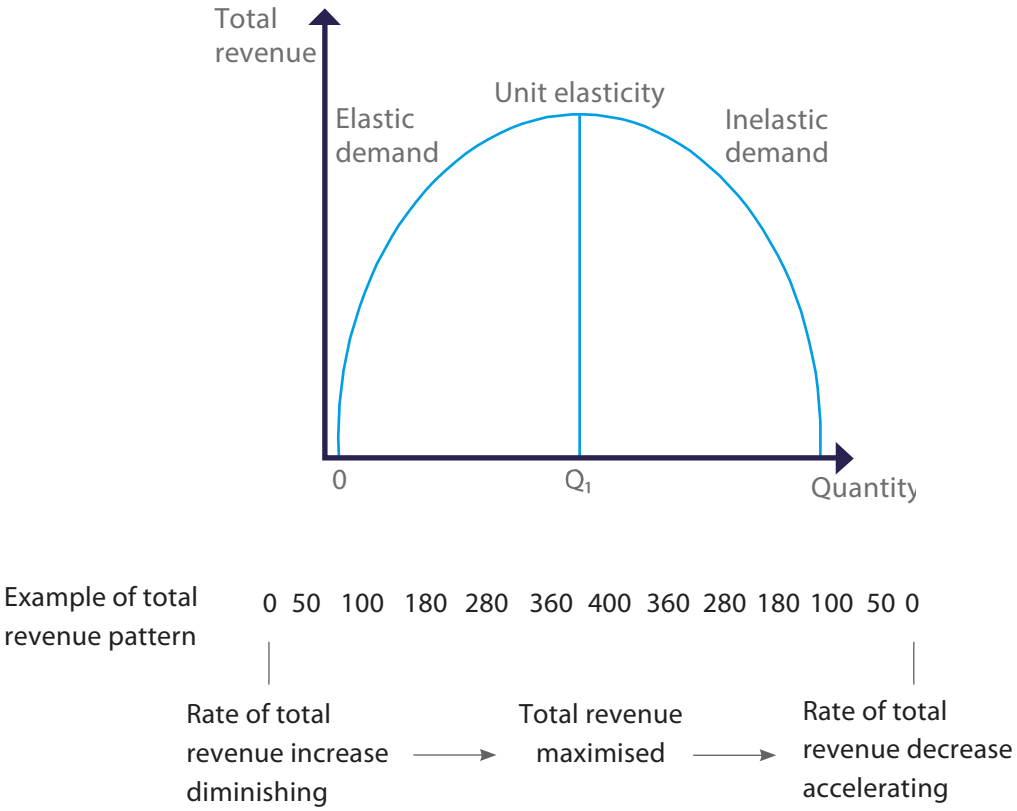


Figure 6: Price Elasticity of Demand and Total Revenue

Knowing the PED for a good or service is particularly useful when a firm wishes to employ discriminatory or differential pricing, by segmenting the market for its product and charging each market segment a different price. Rail companies, for instance, meet inelastic demand for peak services with higher prices than for elastic off-peak travel. Larger multi-branded motor vehicle manufacturers also operate discriminatory pricing through their various marques.

There are numerous factors that determine the PED for a good. These include:

- **Substitutes** – in the short run, consumers may find it difficult to adjust their behaviour or spending patterns in response to a price rise unless there is a viable alternative. A rise in the cost of peak time train travel faced by city commuters illustrates this. If over time, however, substitutes become available, the demand for this good or service becomes increasingly price elastic. The availability of choice alters spending patterns.
- **The percentage of an individual's total income, or budget, devoted to the good** – goods that account for a small percentage of one's income are usually price inelastic.
- **Habit-forming goods** – goods that can become addictive, such as tobacco, are also price inelastic.

3.2.2 Cross Elasticity of Demand (XED)

Cross elasticity of demand (XED) measures the change in quantity demanded against the change in price of either a substitute or complementary good.

Cross elasticity of demand is calculated as follows:

$$\text{XED} = \frac{\%\text{ change in quantity demanded}}{\%\text{ change in price of substitute/complementary good}}$$

Theoretically:

- Substitute goods have a positive XED – for example, if the price of cars rises, then the demand for alternative methods of travel will increase.
- Complementary goods have a negative XED – for example, if the price of diesel and petrol increases, then the demand for cars will fall.

However, this is not necessarily always the case. During the post-COVID pandemic economic recovery, for example, the demand for cars did not fall as expected despite a surge in fuel prices. Many people continued purchasing cars to avoid public transportation, which was perceived as a higher health risk during the pandemic. Hence, other factors can sometimes override the typical economic relationships between complementary goods – in this example, health concerns and safety perceptions.

3.2.3 Income Elasticity of Demand (YED)

Income elasticity of demand (YED) measures the sensitivity of demand to consumers' disposable income and shows the percentage change in the quantity demanded given a small change in income.

Income elasticity of demand is calculated as follows:

$$\text{YED} = \frac{\%\text{ change in quantity}}{\%\text{ change in income}}$$

As noted in section 3.1.1, rising income results in increased demand for normal goods. Therefore, all normal goods have a positive YED. This is represented by a parallel shift to the right in the demand curve. By definition, luxury goods have a YED of greater than 1, in that, as consumers' income increases, so the proportion of total income spent on luxury items increases at a greater rate.

The necessities of life, however, have a YED of 1 or less. Some necessities have positive values, and others negative. Those with negative values are inferior goods. For example, rising income levels have seen a shift away from commoditised portable CD players – once a luxury item – to technologically superior mobile phones with music players built in.

Again, knowing the YED for a particular good or service helps firms plan for future production and assists government in deciding how to raise revenue from applying indirect (or expenditure) taxes, such as value added tax (VAT), given forecasts of income growth.

3.3 The Theory of the Firm

Learning Objective

5.2.2 Know the theory of the firm: profit maximisation; short and long run costs; increasing and diminishing returns to factors; economies and diseconomies of scale

In economics, a simplifying assumption is made that firms seek to maximise profits. Although firms may have other objectives, which we explore throughout this text, we will stay with this assumption for the purpose of the ongoing analysis.

3.3.1 Profit Maximisation

Firms maximise profit by equating **marginal revenue (MR)** to marginal cost (MC). This means that a firm will manufacture units of a product until the extra (or marginal) revenue generated by the sale of one additional unit equals the cost of producing this one additional unit. In other words, MR is the additional revenue from selling one more unit.

Profits are maximised where: MR = MC, as the following diagram explains.

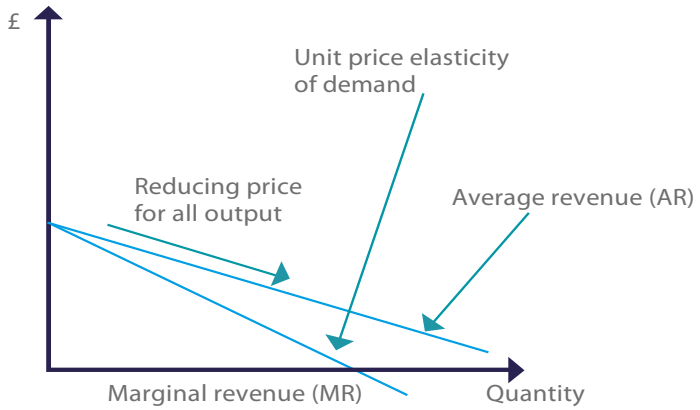


Figure 7: Total Average and Marginal Revenue

We saw earlier that the more units of a product we buy from a firm, the lower the average price per unit we expect to pay. This is depicted by the average revenue (AR) curve, which is also the demand curve for the product. AR is the price per unit.

The progressively smaller additional amount of revenue received from the sale of each additional unit of product as we move down the AR curve is illustrated by the MR curve. You will notice that the slope of the MR curve is steeper than that of the AR curve given the progressively smaller contribution made to total revenue as the sale of units increases.

MR will always be lower than AR. To demonstrate this, let us consider an example.

Example

A monopolistic firm is the sole producer of a particular gadget. If the firm can sell one gadget for $10, then the total revenue, average revenue and marginal revenue from selling this one unit is $10.

However, in order to sell a second unit, the price (ie, the average revenue) must be reduced – to, say, $9 per gadget. The total revenue has increased from $10 to $18 (ie, $9 x 2 units), and the marginal revenue is $8 (ie, $18 – $10).

If the sale of a third gadget requires the price to be reduced to $8 per unit, the total revenue is now $24 (ie, $8 x 3 units), so the average revenue has fallen to $8 per unit (ie, $24 / 3) and marginal revenue to $6 (ie, $24 - $18).

The table below shows how total revenue is calculated, and how average revenue and marginal revenue are derived from these values.

Quantity Q	Price P	Total Revenue TR = Q x P	Average Revenue	Marginal Revenue
1	$10	$10	$10	$10
2	$9	$18	$9	$8
3	$8	$24	$8	$6
4	$7	$28	$7	$4
5	$6	$30	$6	$2
6	$5	$30	$5	$0

At the point where the MR curve cuts the horizontal axis, any additional sales will detract from the firm's total revenue. By producing and selling the quantity of goods at this point, the firm maximises its revenue. You may recall that at this point on AR curve, there is unit price elasticity of demand for the product. Below this point, the demand curve is inelastic, so any further fall in price resulting from increasing sales of the product will reduce total revenue.

3.3.2 Short and Long Run Costs

The amount that a manufacturer produces which will be determined by costs.

In economics, the treatment of costs is unique in three respects:

1. Costs are defined not as financial but as opportunity costs; that is, the cost of forgoing the next best alternative course of action.
2. Cost includes what is termed **normal profit**, or the required rate of return for the firm to remain in business.
3. Economics distinguishes between the short run and the long run when analysing the behaviour of costs.

Short Run Costs and Increasing and Diminishing Returns

In the short run, it is assumed that the stock of capital equipment available to each firm and its efficiency in the production process is fixed. This gives rise to what is known as a fixed cost (fixed because the cost will be incurred regardless of production).

The only resources available in varying quantities to the firm in the short run are labour and raw materials; therefore, both are variable costs.

In the short run, the average total cost faced by the firm in its production is given by the sum of this fixed and variable cost divided by the number of units produced. The short run marginal cost is the cost to the firm of increasing its production by one additional unit of output.

As the amount of labour employed in the production process increases, so the short run average cost of producing additional units falls, as a direct result of the fixed cost being spread over a greater number of units and increasing returns to labour, or rising productivity.

Beyond a certain level of output, however, the marginal cost of producing one additional unit becomes greater than the average total cost. The reason for this is diminishing returns to labour begin to set in as the increased use of labour becomes less productive given that the firm's productive capacity is constrained by a fixed amount of capital equipment.

Progressively, this effect begins to far outweigh that of spreading the fixed cost across a greater amount of production.

Finally, in the short run, each firm only needs to cover its variable costs of production with the revenue generated by product sales when deciding whether or not to produce units, as the fixed costs will be incurred regardless of any production decision. In this context, fixed costs are known as sunk costs.

Long Run Costs and Economies and Diseconomies of Scale

What differentiates the short run from the long run is the length of time necessary for adjustments to be made to each and every one of the factors of production used in the production process.

In the long run, all factors of production, or inputs to the production process, are variable. In effect, the long run is an amalgamation of a series of short runs, though without the capital constraints.

In the long run, the production process benefits from economies of scale as the firm's productive capacity increases. Note that the term '**economies of scale**' is used here, rather than simply 'increasing returns to labour', given the flexibility with which all factors of production can be employed. Production costs are minimised at a point known as the **minimum efficient scale (MES)**. Beyond this point, diseconomies of scale set in as management bureaucracy negatively impacts the production process.

Finally, in the long run, unlike in the short run, all costs of production must be covered when making the decision to produce output. So long as the revenue generated by product sales covers all costs, then the firm will be making a normal profit.

3.4 Industrial Structure

Learning Objective

5.2.3 Know firm and industry behaviour under: perfect competition; perfect free market; monopoly; oligopoly

The diagram below provides a simplified representation of different market structures.

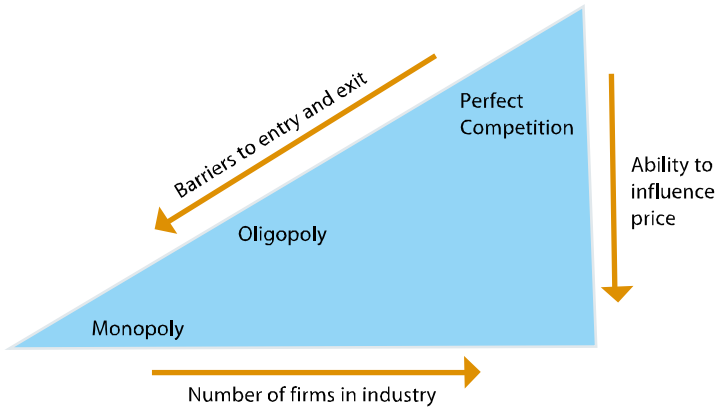


Figure 8: Industrial Structure

Although it does not necessarily follow that in all industries the greater the number of firms, the more competitive the industry, it is a useful assumption to make for the purposes of simplifying the analysis of firms' production decisions based on profit maximisation.

We will consider how firms operate under these different types of competition.

3.4.1 Perfect Competition

Perfect competition is a theoretical representation of how a perfectly free market would operate where no one buyer or seller is able to influence the price of a single homogeneous product. A perfectly competitive firm is one that operates within an industry containing an infinite number of firms, each of which accepts the market price for a homogeneous product set by the interaction of consumer demand for the industry's total supply. In the long run, perfectly competitive firms only generate normal profits.

Although impossible to fully replicate in practice, the market for grain comes close to meeting the assumed characteristics of a perfectly competitive industry, as the actions of an individual grain farmer or a grain merchant are unlikely to influence the market price of grain. Both, therefore, are described as being price takers.

The characteristics of a perfectly competitive industry are as follows:

- No single firm dominates the industry, which contains an infinite number of firms.
- Firms do not face any barriers to entry or exit from the industry.
- A single homogeneous product is produced by all firms in the industry.
- There is a single market price at which all output produced by any one firm can be sold.
- There is an infinite number of consumers who all face the same market price.
- Perfect information about the product, its price and each firm's output are freely available to all.

Ignoring (for the moment) a market where either a monopoly or oligopoly exists in a perfectly competitive market, if one firm was earning 'supernormal profits' then other firms would enter the market, supply the good and thereby drive down the availability of profits until the supply matched the demand and these supernormal profits were eroded. No-one would have an advantage over the other, be it firm or consumer.

3.4.2 Monopoly and Oligopoly

A monopoly is a market structure where there is only one producer or supplier and entry into the industry is restricted due to high costs or economic, political or social restrictions (ie, there are barriers to entry); thus, a monopolist firm is able to set rather than accept the market price for its output. An oligopoly exists where a limited number of highly interdependent firms dominate an industry, typically through either implicit or explicit collusion on price and output.

Firms that operate in either form of market have some influence on their own output and pricing decisions; therefore, they can generate profits somewhere between the normal and supernormal levels. This is achieved mainly through subtle product differentiation, through defensive advertising to increase brand loyalty and so reduce the elasticity of demand for their product, and through limited price competition.

Most governments do not like to see one or only a few companies have all the market share in any sector of the economy. This is mainly because it puts the consumer at a disadvantage from getting either the best service or value for money. Most governments and financial regulators strive for competition to make sure that the consumer is getting the best goods at the best price, and because competition drives innovation.

3.4.3 Perfect Free Market

In a perfect free market (often considered to be an idealised economic model), the forces of supply and demand operate without any external intervention or restrictions.

In this theoretical construct, buyers and sellers have perfect information about products and prices, thus allowing for rational decision-making. There are no barriers to entry or exit for firms. Prices are determined solely by the intersection of supply and demand curves, reflecting the true value of goods and services to consumers.

In a free market, resources are efficiently allocated, as firms produce goods and services up to the point where marginal revenue equals marginal cost.

A summary of the characteristics of a perfectly free market are as follows:

- No single firm dominates the industry, which contains an infinite number of firms.
- Firms do not face any barriers to entry or exit from the industry.
- A single homogeneous product is produced by all firms in the industry.
- There is a single market price at which all output produced by any one firm can be sold.
- There is an infinite number of consumers who all face the same market price.
- Perfect information about the product, its price and each firm's output are freely available to all.

The perfect free market serves as a theoretical benchmark for understanding economic principles. In reality, markets often deviate from this ideal due to factors such as imperfect information, externalities and government regulations.

4. Statistics

The ability to source and interpret all kinds of information, both qualitative and quantitative, in a timely fashion is key to the investment management process. However, since information or data can be sourced from a variety of media, is presented in a wide range of formats and is not always in a readily usable form, becoming familiar with information sources and being able to assimilate data is imperative if informed investment decisions are to be made and investment opportunities are to be capitalised upon.

4.1 Measures of Central Tendency and Dispersion

Drawing inferences or conclusions from numerical data can be difficult. Statistics make this possible by drawing on what are known as measures of central tendency and measures of dispersion and are often known as 'descriptive statistics', as they help describe data. Two kinds of statistics are frequently used to describe data:

- **Measures of central tendency** such as the mean, **median** or **mode**. They are used to establish a single number or value that is typical of the distribution – that is, the value for which there is a tendency for the other values in the distribution to surround.
- **Measures of dispersion** such as range, variance and **standard deviation**. These, however, quantify the extent to which these other values within the distribution are spread around, or deviate from, this single number. This describes the extent to which returns have diverged from one set of performance figures to another – hence the dispersion of returns.

4.1.1 Measures of Central Tendency

Learning Objective

5.3.1 Know the following: arithmetic mean; geometric mean; median; mode (this may be examined by use of a simple calculation)

When you have a set of data and need to summarise it, you will often wish to establish an average that converts the data into a single number that you can use more usefully. The measures of central tendency help capture a single number that is typical of the data. There are three measures of central tendency:

- **Mean** – the average value of all the data.
- **Median** – the middle item that has exactly half the data above it and half below it.
- **Mode** – the most common number that occurs.

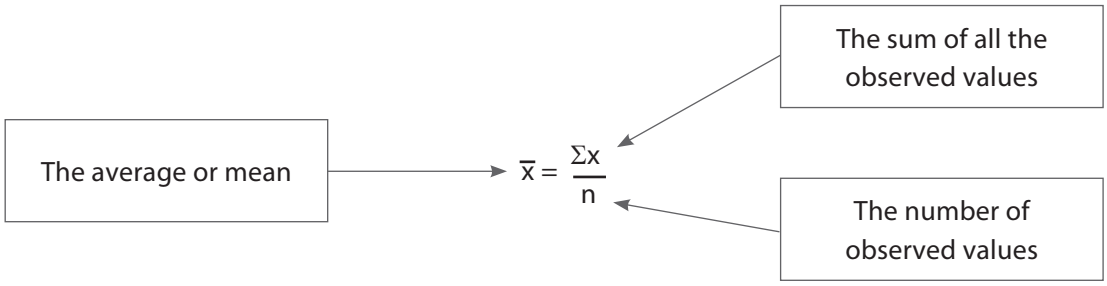
The way in which each is calculated is shown below.

Mean or Arithmetic Mean

The **arithmetic mean** is calculated by adding together all the values in a data set and then dividing that sum by the number of observations in that set to provide the average value of all the data.

So, for example, if you have six investment funds in your portfolio that produce returns of 7%, 8%, 9%, 10%, 11% and 12%, then the average or mean return is (7%+8%+9%+10%+11%+12%) ÷ 6 = 9.5%.

The mean therefore = the sum of all of the observation values ÷ the number of observations, and is expressed as the following formula:



$\bar{x}$ is the algebraic symbol for the arithmetic mean.

Median

The median is the value of the middle item in a set of data arranged in numerical order. It is established by sorting the data from lowest to highest and taking the data point in the middle of the sequence.

So, for example, with a range of data, as below, the median can clearly be seen and that there is an equal series of numbers both below and above it:

2	5	8	9	12	13	15	16	18
4 numbers				Median	4 numbers			

To calculate the median, you place the values in numerical order and then use the following formula:

$$\text{median} = \frac{(n+1)}{2}$$

where:

n = the number of values in the data set.

So, as you can see in the above example, there are nine values and the median is the fifth one.

If the data has an even set of numbers, then the median is equal to the average of the two middle items as shown in the following:

2	5	8	9	12	13	15	16	18	19
				Median = 12.5 $\frac{(12+13)}{2}$					

The formula in this case is therefore:

$$\text{median} = \frac{(\text{Value below the median} + \text{Value above the median})}{2}$$

Mode

The mode is the most frequently occurring number in a set of data. There can be no mode if no value appears more than any other. There may also be two modes (bimodal), three modes (trimodal), or four or more modes (multimodal). For example, for the following house price values – $100k; $125k; $115k; $135k; $95k; $100k – $100k is the mode.

Which Measure to Use

The mean is the most commonly used measure of central tendency, but it needs to be recognised that the outlier numbers at the extremes of the data influence the result. The median is not influenced in the same way and is often used where there are extreme outliers or where there is skewed data that is not normally distributed. The mode can be problematic as there may be no mode at all, but is useful where categorical data is used, such as where a café has ten different meals on its menu and the mode would represent the most popular.

Geometric Mean

There is another method of calculating the average that we need to consider: the **geometric mean**.

The geometric mean is similar to the arithmetic mean except that instead of adding the set of numbers and then dividing the sum by the count of numbers in the set, the numbers are multiplied and then the nth root of the resulting product is taken.

So, for example, if you have a deposit of $10,000 that you expect will earn 5% pa this year, 6% next year and 5.5% in the third year, then you can use the geometric mean to calculate what the average rate of return is. The geometric average mean rate of return is calculated as follows:

$$\sqrt[3]{(1.05 \times 1.06 \times 1.055)} - 1 = 0.054992101 \text{ or } 5.50\%$$

In addition, you can work out the total investment over the period with interest reinvested; the balance of the account at the end of the three years will be:

$\$10{,}000 \times 1.054992101^3 = \$10{,}000 \times 1.174215 = \$11{,}742.15$

You can prove this is correct as below:

Balance	Interest Rate	Interest	End Year Balance
10,000.00	5%	500	10,500.00
10,500.00	6%	630	11,130.00
11,130.00	5.5%	612.15	11,742.15

The geometric mean can be useful when looking at compound changes such as portfolio returns. It will always result in a number that is less than the arithmetic mean but despite this shortcoming it has a fundamental use in portfolio management where **geometric progressions** can be used to establish the compounded value of a variable over time, with the geometric mean then being employed to determine the average compound annual growth rate implied by this cumulative growth.

4.1.2 Measures of Dispersion

Learning Objective

5.3.2 Know statistical measures of dispersion: variance (sample/population); standard deviation (sample/population); range (this may be examined by use of a simple calculation)

Having calculated a typical value from the data that we have available, we now need to see how widely spread out the set of data is around this average value. Understanding how widely investment returns vary is the basis of many hedging techniques as well as being an important indicator of portfolio returns.

We can quantify this through the use of dispersion measures, which we will now look at in more detail.

Standard deviation is used to establish the distribution of values around the mean, and the range and inter-quartile range are used for the median. Each of these is considered below.

Range

The simplest measure of dispersion is the range, which is the difference between the highest and lowest values in a set of data.

Let us assume that the following numbers represent the returns from an investment fund over the past ten years:

Year	1	2	3	4	5	6	7	8	9	10
Return	13	11	2	6	5	8	7	9	7	6

Using the range measure would indicate that the average returns from the fund had a range of 11 (13 – 2).

The main drawback in using range as a measure of dispersion is that it is distorted by extreme values and ignores the numbers in between.

Variance

Variance measures the spread of data to determine the dispersion of data around the arithmetic mean. To do this, we calculate the difference between the return in each year from the arithmetic mean, square each one, and then total them together. The average of this figure represents the variance.

Following on with the example of ABC Investment Fund, to demonstrate this. Firstly, the arithmetic mean for the returns is: (13% + 11% + 2% + 6% + 5% + 8% + 7% + 9% + 7% + 6%) ÷ 10 = 7.4%. Row 2 shows the difference in the return each year from the arithmetic mean, and row 3 shows this difference squared. Row 4 then shows the average which represents the variance.

	Year	1	2	3	4	5	6	7	8	9	10	Total
1	Return	13	11	2	6	5	8	7	9	7	6	
2	Difference from the arithmetic mean $x - x$	5.6	3.6	–5.4	–1.4	–2.4	0.6	–0.4	1.6	–0.4	–1.4	
3	Difference squared $(x - x)^2$	31.36	12.96	29.16	1.96	5.76	0.36	0.16	2.56	0.16	1.96	86.40
4	Average (86.40 ÷ 10)											8.64

Variance is useful in that it provides a measure of dispersion and is used to calculate the beta of a stock, but it results in a value in different units than the original. It is obviously much easier to measure dispersion when it is expressed in the same units, and this is known as standard deviation.

Standard Deviation

The Standard deviation is used to establish the distribution of values around the mean. The range and the interquartile range are used for dispersion around the median. It is simply the square root of the variance and is the most commonly used measure of dispersion. The formula for calculating it is therefore:

$$\sqrt{\frac{\sum\left(x-\bar{x}\right)^2}{n}}$$

Staying with the above example of ABC Investment Fund, the standard deviation of the returns from the investment fund is the square root of the average of 8.64, which is 2.94.

Although the variances and standard deviations of both ordered raw and **frequency distribution** data can be calculated quickly and easily by using a scientific calculator, it is useful to understand how to work through their calculation manually. In summary, the steps you should take in making these calculations manually are to:

- obtain the arithmetic mean
- obtain the set of deviations from the mean
- square each deviation
- divide the sum of the squared deviations by the number of observations to obtain the **population** variance, and
- take the square root of the variance in each case to obtain the standard deviation.

To ensure precision in the calculation of the variance and standard deviation, statistical rules require a slight change to the formula if measuring a **sample**. The limitations of small data sets include the fact that they may not provide a representative picture of the population as a whole, and so sampling errors may arise. As a result, a slight adjustment to the standard deviation formula is made by reducing the number of observations by 1.

Sample standard deviation $= S = \sqrt{\frac{\sum\left(x-\bar{x}\right)^2}{n-1}}$

In effect, by taking the square root of the variance, the standard deviation represents the average amount by which the values in the distribution deviate from the mean. With sufficiently large data, the pattern of deviations from the mean will be spread symmetrically on either side and, if the class intervals are small enough, the resultant frequency distribution curve may look like the cross-section of a bell (ie, a bell-shaped curve, also called a normal distribution or Gaussian distribution).

Statistical analysis shows that in a **normal frequency distribution** curve:

- approximately two-thirds or 68% of observations will be within one standard deviation either side of the mean
- approximately 95% of all observations will be within two standard deviations either side of the mean, and
- approximately 99.7% of all observations will be within three standard deviations of the mean.

In the following graph, the Greek letter sigma (σ) represents the standard deviation, where each band has a width of 1 standard deviation in absolute terms.

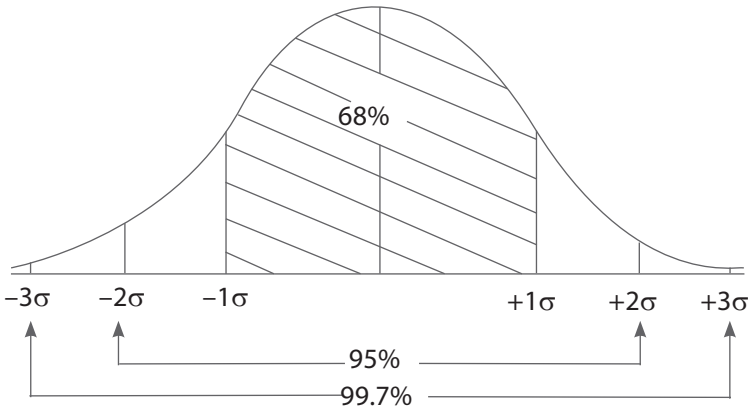


Figure 1: Normal Frequency Distribution Curve

Example

A mutual fund has generated an average return of 8% per annum with a standard deviation of returns of 5%. What range of returns can be expected if returns are normally distributed?

- Approximately 68% of returns can be expected to fall in a range of 3% to 13% (8% ± 1 x 5%).
- Approximately 95% of returns can be expected to fall in a range of –2% to 18% (8% ± 2 x 5%).
- 99.7% of returns can be expected to fall in a range of –7% to 23% (8% ± 3 x 5%).

Data, however, does not always conform to a normal pattern and is then referred to as 'skewed'. Most long-run distributions of equity returns are skewed; that is, equity markets produce more extreme positive and negative returns than should statistically be the case – a phenomenon known as kurtosis – but the extreme positive values far outweigh the extreme negative ones.

Candidates should understand that models can be based on assumptions and some aim to make sure that large infrequent data does not skew the outputs to therefore supply the 'normally distributed' results. Models themselves have human inputs, which tend to discount the large positive and negative potential skews, which is why most models failed to predict the magnitude of the global financial crisis, among other extreme events.

Inter-Quartile Range (IQR)

The interquartile range ranks data (eg, comparable performance returns from funds) against each other, presents the data as a series of quartiles, and then measures the difference from the lowest rank quartile to the highest.

Let us assume that the following figures represent the returns from a number of comparable investment funds. The data is first ranked in order of highest to lowest, the median is identified and the set is then divided into a series of quartiles.

Fund	A	B	C	D	E	F	G	H	I	J	K	L
Return	9%	8%	7.5%	7%	6.5%	6%	5.75%	5%	5%	4.75%	4%	3.5%
				Median 5.875%								
Quartiles	1st quartile			2nd quartile			3rd quartile			4th quartile		
Inter-quartile range												

Q_3 Q_1

A fund with a return in the first or second quartile would rank in the top half of fund performances, whereas a fund in the third or fourth quartile would rank in the bottom half. Following on from this, a fund in the first quartile would have delivered returns in the top 25% of the rest of the sample, while one in the fourth quartile would have been exceeded by 75% of the rest of the sample.

The interquartile range is the difference in returns between the 25th percentile-ranked fund and the 75th percentile-ranked fund; ie, Q3 – Q1. In other words, find the median of the data set, and then the median of the two halves created; the interquartile range is the difference between these latter two medians. The smaller the range, the less difference there is in the funds being examined. In this case, Q3 = (7.5% + 7%) / 2 = 7.25% and Q1 = (5% + 4.75%) / 2 = 4.875%, giving an interquartile range of 2.375%.

4.2 Diversification and Correlation

Learning Objective

5.3.3 Understand the correlation and covariance between two variables and the interpretation of the data

4.2.1 Diversification

The risk of holding securities A and B in isolation is given by their respective standard deviation of returns. However, by combining these two assets in varying proportions to create a two-stock portfolio, the portfolio's standard deviation of return will, in all but a single case, be lower than the weighted average sum of the standard deviations of these two individual securities. The weightings are given by the proportion of the portfolio held in security A and that held in security B (when added together, the two weighting equal 1, or 100%).

This reduction in risk for a given level of expected return is known as diversification.

To quantify the diversification potential of combining securities when constructing a portfolio, two concepts are used: **correlation** and **covariance.**

This is where an element of risk reduction comes in. The idea is to create a portfolio of securities when asset classes (or securities) are combined together, but in different percentages so as to lower the overall volatility of returns compared to the individual sum of the parts. (Note that volatility is not risk, although the two terms are often used interchangeably – volatility is the uncertainty of returns and risk is about not getting your money back, ie, capital at risk.)

That said, diversification and risk reduction are less likely to be achieved by investing in two asset classes or securities that perform in the same way; rather, they are achieved by combining securities whose returns ideally move in the opposite direction to one another or, if in the same direction, at least not to the same degree.

When investment managers consider investing in asset classes, they mainly look at their historic levels of return and commensurate risk. However, when they consider asset classes against each other or building diversified investment portfolios, they also have to consider another key feature: the correlation between the investment performances of the various asset classes.

4.2.2 Correlation

Correlation measures how the returns from two different assets move together over time and is scaled between +1 (perfectly positively correlated) and –1 (perfectly negatively correlated).

- A perfect correlation is where a change in the price of one share is exactly matched by an equal change in another.
  - If both increase together by the same amount, they have a perfect positive correlation and the correlation coefficient is +1.
  - If one decreases by the same extent as the other increases (ie, they tend to move in opposite directions), they are said to have a perfect negative correlation and this is described by a correlation coefficient of –1.
- Where there is no predictable common movement between security returns (ie, they tend to move independently of each other), there is said to be zero or imperfect correlation; the closer that the correlation is to zero, the weaker the relationship, and therefore the greater the diversification benefits.

  An example of two asset classes with little relationship and, therefore, a correlation close to zero might be UK government bonds and Japanese equities. However, it is rare to find securities with zero correlation because most financial assets are influenced by similar macroeconomic factors or market trends – even if two assets appear unrelated on the surface, then they often share some underlying connection that can manifest over time.

Example

A simple example of correlation is to look at what an investor might expect if they bought shares in two companies, one an ice cream manufacturer and the other a raincoat manufacturer. To keep things simple, if we assume that the profits of the two companies are only affected by the weather then we would expect their profitability to be affected in opposite ways. In good weather, the demand for ice cream increases and the demand for raincoats falls and vice versa, in the case of bad weather; one prospers when the other does badly. In this example, the two companies are negatively correlated.

In summary, diversification and risk reduction are achieved by combining assets whose returns are not perfectly positively correlated with one another. Assets with a low correlation are attractive to investors, in that, when one asset is performing badly, the other asset is hopefully rising in value. Professional investors look at the interactions of all the asset classes in different combinations and circumstances. They diversify to balance out the fluctuations in their performance and achieve the best balance between return and risk, not to maximise performance.

It is important to recognise, however, that correlation coefficients are dynamic and can unexpectedly change by a large amount in either direction. In times of market stress (eg, the global financial crisis and during the COVID-19 pandemic), correlations tend to rise significantly as nervous investors seek to sell risky positions, reduce their risk and increase liquidity – a phenomenon known as correlation compression.

4.2.3 Covariance

Covariance is a statistical measure of the relationship between two variables, such as share prices. The covariance between them will depend on their individual risks (standard deviations) and the degree of correlation between them (correlation coefficient).

An example of this would be if share A produces high returns whenever share B produces high returns, and vice versa. These outcomes would mean that they have a high positive correlation. Clearly, in a diversified portfolio, the inclusion of A's shares and B's shares would not reduce risk as much as choosing two stocks with prices that react differently to each other (ie, have low positive or negative correlation).

The covariance between two shares is calculated as follows:

$$COV_{AB} = \frac{\Sigma\left(x_A - \bar{x}\right)\left(y_B - \bar{y}\right)}{N}$$

where:

$(x_A - \bar{x})$ = the difference between each return and the mean return for A

$(y_B - \bar{y})$ = the difference between each return and the mean return for B

N = the number of data points

A positive covariance between the returns of A and B means they have moved in the same direction, while a negative covariance means they have moved inversely. The lower the correlation and standard deviations of the two securities, the lower the covariance. Low covariance is perceived as good since it implies that the securities are not moving in tandem, and this lack of synchronisation can potentially reduce the overall risk of the portfolio through diversification.

If one of the securities had a higher standard deviation than the rest, when combined with another security, because of correlation between them, risk will be reduced.

The key message here is that to reduce risk, portfolios should ideally contain shares as negatively correlated to each other as possible and with low standard deviations so as to reduce the covariance (and risk).

4.2.4 Summary

From these two concepts, the following conclusions can be drawn:

- Although it is perfectly possible for two combinations of two different securities to have the same correlation coefficient as one another, each may have a different covariance, owing to the differences in the individual standard deviations of the constituent securities.
- A security with a high standard deviation in isolation does not necessarily have a high covariance with other shares. If it has a low correlation with the other shares in a portfolio then, despite its high standard deviation, its inclusion in the portfolio may reduce overall portfolio risk.
- Portfolios designed to minimise volatility/risk should contain securities as negatively correlated with each other as possible and with low standard deviations to minimise the covariance.

5. Financial Mathematics

Money has a time value. That is, money deposited today will attract a rate of interest over the term it is invested. So, $100 invested today at an annual rate of interest of 5% becomes $105 in one year's time. The addition of this interest to the original sum invested acts as compensation to the depositor for forgoing $100 of consumption for one year.

Some of the standard calculations based on the time value of money are:

- **Present value (PV)** – the present value of an amount that will be received in the future.
- **PV of an annuity** – the present value of a stream of equally sized payments.
- **PV of a perpetuity** – the present value of a regular stream of payments which lasts indefinitely.
- **Future value (FV)** – the future value of an amount invested now at a given rate of interest.
- **FV of an annuity** – the future value of a stream of interest payments at a given rate of interest.

These equations are used frequently in investment management to calculate the expected returns from investments, in bond pricing and for appraisal of investment opportunities. (Note that there is no FV formula for a perpetuity as there is no end date; thus, theoretically, the FV of a perpetuity is infinite.)

In this section, we will look firstly at simple and compound rates and how they are calculated, and then at present and future values, and finally at investment appraisal and discount rates.

5.1 Simple and Compound Interest

Learning Objective

5.4.2 Be able to calculate and interpret the data for: simple interest; compound interest (this may be examined by use of a simple calculation)

Interest, whether payable or receivable, can be calculated on either a simple or compound basis, which we will now look at in more detail.

5.1.1 Simple Interest

Simple interest is calculated only on the original capital sum, and assumes that the interest is withdrawn at the end of each interest period. This is the most basic of interest calculations and very straightforward.

This is obviously the most basic of interest calculations and very straightforward, so if $100 is invested at 5% for one year, then you will clearly receive $5 interest.

In formula terms, this calculation can be expressed as:

$$\text{Simple Interest} = \text{Principal} \times \text{Rate} \times \text{Time}$$

or:

$$I = p \times r \times t$$

where:

I = simple interest, which is the total amount of interest paid
p = initial sum invested or borrowed (also called the principal)
r = rate of interest to be expressed as a decimal fraction, ie, for 5% use 0.05 in the calculation
t = number of years or days expressed as a fraction of a year.

The variations on this straightforward calculation are where the time period that the amount is invested in is a number of years, or alternatively, a number of days.

Example

Regarding the term 't', the denominator is determined by the day count convention – in the UK, the conventional year is 365 days (even in a leap year); some other countries have different conventions. For the numerator, in investment, one month is taken as 30 days, three months as 91 days, six months as 183 days, and nine months as 270 days.

For example, if 1,000 yuan is invested at 5% for one year, then the investor will receive interest of 50 yuan (ie, 1,000 x 0.05 x 1).

The variations on this straightforward calculation are where the amount remains invested for a number of days or, alternatively, for a number of years. For example:

- €300 is invested at a rate of 4% pa for 50 days, thus I = €300 x 0.04 x 50/365 = €1.64.
- €900 is invested at a rate of 2.5% pa for nine months, thus I = €900 x 0.025 x 270/365 = €16.64.
- €200 is invested at a rate of 7% pa for two years, thus I = €200 x 0.07 x 730/365 = €28.00.

5.1.2 Compound Interest

In contrast to simple interest, compound interest is calculated on the original capital sum plus accumulated interest to date. In other words, compound interest assumes that the interest earned is left in the account or reinvested at the same rate.

For example, if £100 is deposited in an account at 5% pa where the interest is credited to the account at the end of the year, then the balance at the end of the year will be £105. In the second year, interest at 5% will be earned on the starting balance of £105, amounting to £5.25, and the balance on which interest will be earned in the third year will be £110.25, and so on. This is shown in the table below:

Year	Balance at the start of the year	Interest rate	Interest for the year	Balance at the end of the year
1	100.00	5%	5.00	105.00
2	105.00	5%	5.25	110.25
3	110.25	5%	5.51	115.76
4	115.76	5%	5.79	121.55
5	121.55	5%	6.08	127.63

The basic formula for calculating compound interest is:

$$A = P \times (1 + r)^n$$

where:

A = the final amount
P = the initial sum invested
r = the rate for the period
n = the number of years

For the above example: A = £100 x $(1 + 0.05)^5$ = £100 x 1.2763 = £127.63 (rounded to 2 decimal places).

5.2 Future Value

Learning Objective

5.4.1 Be able to calculate the present and future value of: lump sums; regular payments; annuities; perpetuities (This may be examined by use of a simple calculation)

Of more practical use to a financial adviser is understanding how the simple and compound interest calculations, among similar formulae, can be used to calculate how much an asset might grow to, or the reverse. In other words, how much needs to be invested today, so it grows to a particular amount?

To calculate this, we can use the formula for future value (FV):

$$FV = PV \times (1 + r)^n$$

where:

PV = the present value
r = the rate of interest, expressed as a decimal
n = the number of years

As its name suggests, FV refers to the future value of an amount invested now at a given rate of interest. We effectively looked at future value when we considered compounding interest in section 5.1.2.

For example, if a client were to invest $10,000 for seven years and the anticipated growth is 6% pa, you can use the FV formula to estimate what the value at the end of the term would be, as follows:

$$\$10,000 \times (1+0.06)^7 = \$15,036.30$$

Where interest is paid more frequently, the formula is adjusted as follows:

$$FV = PV \times \left(1 + \frac{r}{i}\right)^{n \times i}$$

where:

i = the number of time periods within a year

Staying with the same example of $100 invested for five years, but with interest paid half-yearly (ie, i = 2) – in other words, there will be ten half-yearly interest payments of 2.5% each. In this scenario, the final value would become:

$$\$100 \times 1.025^{10} = \$128.00845$$

5.3 Present Value (PV)

The other formula that advisers should be able to do readily is one called present value (PV). This is the reverse of the future value (FV) formula and is expressed as:

$$\mathbf{PV} = \frac{\mathbf{FV}}{(\mathbf{1}+\mathbf{r})^{\mathbf{n}}}$$

5.3.1 Present Value of a Future Lump Sum

So, going back to the same example, we saw that $100 invested for five years at 5% pa would be worth $127.63 at the end of the term.

The PV formula can be used to answer the question: how much needs to be invested today to produce $127.63 if the funds can be invested for five years and are expected to earn 5% pa?

$$\text{The amount that needs to be invested today} = \frac{\$127.63}{(1+0.05)^5} = \$100$$

As an example of a practical use of this formula, consider the question: how much does an investor need to invest today if they need a lump sum of ¥250,000 in seven years' time and the rate that can be earned is 2% per annum? The formula would be:

$$\frac{¥250{,}000}{(1+0.02)^7} = ¥217{,}640$$

A further useful tool is to know how to simply calculate how long it would take for an investment to double in value. A shorthand way is the 'Rule of 72' – this involves dividing 72 by the annual rate of return or growth rate, and the result is a (very rough but reasonably accurate) estimate of the time this would take.

To demonstrate this, let's consider an investment that is expected to grow at 5% a year. Dividing 72 by 5 gives 14.4; ie, it will take about 14 years for the investment to double in value at a compound growth rate of 5%.

This is an approximate figure only, but you can see how reasonably close the result is by using the future value formula: $100 invested today at 5% pa for 14 years is:

$$\$100 \times (1.05)^{14} = \$197.99$$

Being readily able to calculate how much a client's investment might grow by or what sum is needed to achieve a desired objective is clearly a key skill in providing the correct financial advice.

As the present value formula expresses future cash flows in today's terms, it allows a comparison to be made of competing investments of equal risk which have the same start date, but have different payment timings or amounts.

5.3.2 Present Value of an Annuity or Regular Payment

Present value of an **annuity** refers to a series of equal cash payments that will be received over a specified period of time.

As before, the present value of an annuity is calculated by discounting the cash flows to today's value. The same formula can be used for regular payments.

We will first consider where payments are made in arrears. If we expect to receive payments of $100 over the next three years, we can calculate their present value (assuming interest rates are 5%) using the below formula.

Year	Cash Flow	Discount Rate	Formula	Discount Factor	Present Value
1	100.00	5%	100.00 ÷1.05	0.9524	95.24
2	100.00	5%	100.00 ÷1.05^2	0.9070	90.70
3	100.00	5%	100.00 ÷1.05^3	0.8638	86.38
Total					272.32

So, the present value of those future payments is $272.32. The table also shows how this converts into a discount factor, that is, how much the future value discounted by in decimal terms is.

Instead of calculating each present value, this can be calculated by using another formula:

$$\text{Present value of annuity} = \$x \times \frac{1}{r} \times \left[1 - \frac{1}{(1+r)^n}\right]$$

where:

$x = the amount of the annuity paid each year
r = the rate of interest over the life of the annuity
n = the number of periods that the annuity will run for.

Taking the example above, the formula would become:

$$\text{Present value of an annuity} = \$100 \times \frac{1}{0.05}\left[1 - \frac{1}{(1+0.05)^3}\right]$$

An alternative method of calculation and one that can also be used to find out the present value of a bond is:

$$\text{Present value of an annuity} = \text{Annuity} \times \left[\frac{1-(1+r)^{-n}}{r}\right]$$

Using the same figures as above, the formula becomes:

$$£100 \times \left[\frac{1-\left(\frac{1}{1.05^3}\right)}{0.05}\right] \text{or} \left[\frac{1-\left(\frac{1}{1.157625}\right)}{0.05}\right] \text{or} \left[\frac{1-0.8638376}{0.05}\right] = £100 \times \frac{0.13616}{0.05} = £272.32$$

The PV of an annuity can be used for calculating such things as an annuity or the monthly repayments on a mortgage. It can also be used in investment appraisal.

5.3.3 Present Value of Perpetuities

Perpetuity is a series of regular cash flows that are due to be paid or received indefinitely, which in practice is defined as a period beyond 50 years.

It is simply calculated using the following formula:

$$\text{Present value of a perpetuity} = \text{annuity} \times \frac{1}{r}$$

So, for example, if €1,000 is to be received each year in perpetuity, what is its present value at an interest rate of 5%?

$$PV = €1,000 \times \frac{1}{0.05} = €20,000$$

Although a perpetuity really exists only as a mathematical model, it can be used to approximate the value of a long-term stream of equal payments by treating it as an indefinite perpetuity. For example, if you have a commercial property that generates £10,000 of rental income and the discount rate is 8%, then the formula can be used to calculate its present value by capitalising those future payments into its present value, which would be £125,000.

6. Fundamental and Technical Analysis

Learning Objective

5.5.1 Know the difference between fundamental and technical analysis: primary objectives; quantitative techniques; charts (primary vs secondary vs tertiary movements); volume, momentum, moving averages and other indicators

The methods used to analyse securities in order to make investment decisions can be broadly categorised into **fundamental analysis** and **technical analysis**. We will consider the key features and the main differences below.

6.1 Fundamental Analysis

Fundamental analysis involves the financial analysis of a company's published accounts, along with a study of its management, markets and competitive position. It is a technique that is used to determine the value of a security by focusing on the underlying factors that affect a company's business.

Fundamental analysis looks at both:

- **quantitative factors** – eg, the numerical results of the analysis of a company and the market it operates in, and
- **qualitative factors** – eg, the quality of the company's management, the value of its brand and areas such as patents and proprietary technology.

The assumption behind fundamental analysis is that the market does not always value securities correctly in the short term but that by identifying the intrinsic value of a company, securities can be bought at a discount and the investment will pay off over time once the market realises the fundamental value of a company.

Companies generate a significant amount of financial data and so fundamental analysis will seek to extract meaningful data about a company. Many of the key ratios that can be derived from this are considered in section 7 of this chapter.

In addition to this quantitative data, fundamental analysis also assesses a wide range of other qualitative factors such as:

- a company's business model
- its competitive position
- the quality and experience of its management team
- how the company is managed, the transparency of available financial data and its approach to **corporate governance**, and
- the industry in which it operates, its market share and its competitive position relative to its peers.

As a result, a lot of subjective information is used by the fundamental analyst to form present and future assumptions about a company's prospects and, therefore, its share price (as well as other security information, such as bonds in issue, if there are any).

6.2 Technical Analysis

Technical analysis also seeks to evaluate a company, but instead of analysing a company's intrinsic value and prospects, it uses historical price and volume data to assess where the price of a security or market will move in the future. This is very much about looking at past patterns and trends to see if they are repeatable going forward; therefore, technical analysis is unconcerned whether a security is undervalued, and simply concerns itself with future price movements.

The assumptions underlying technical analysis are:

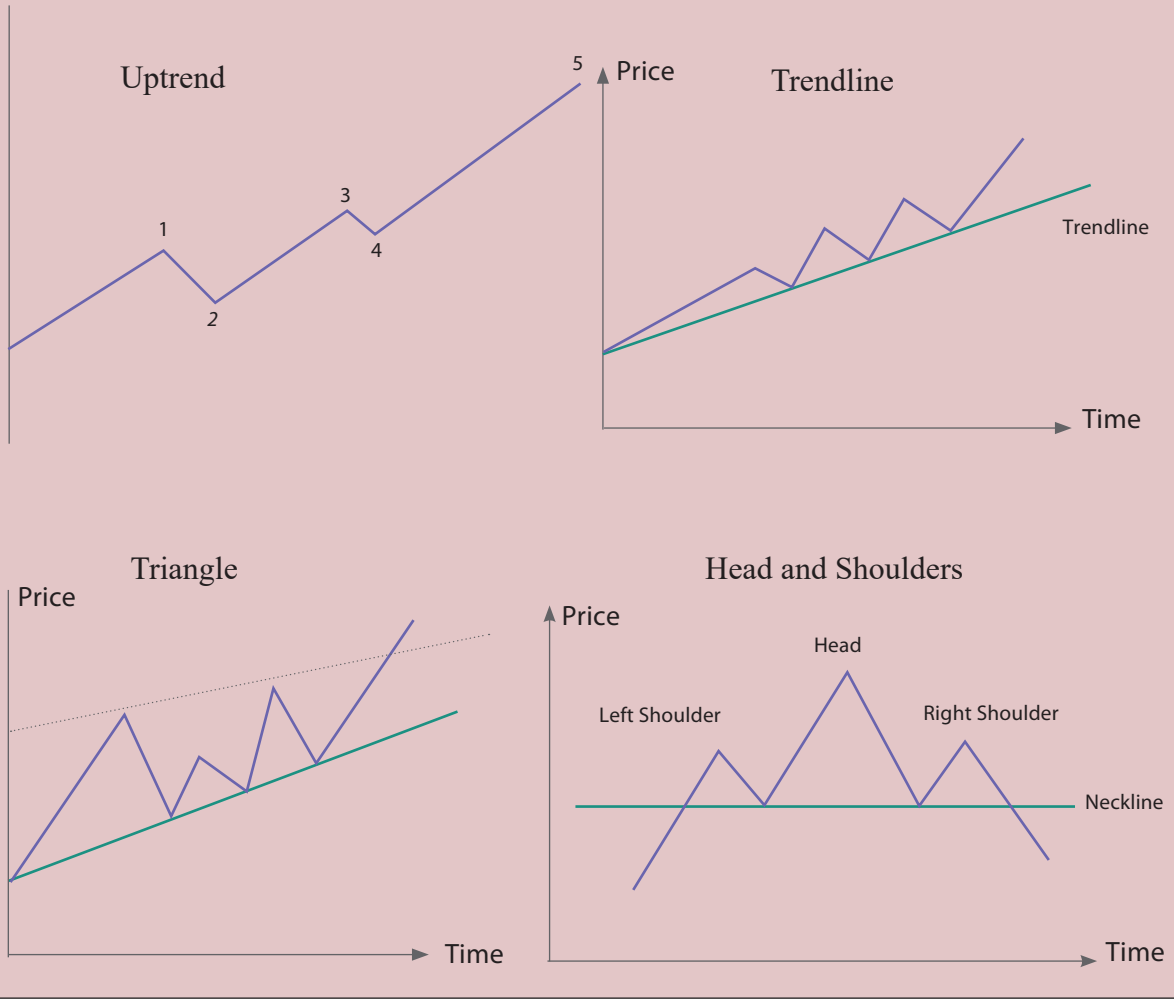
- The market discounts everything.
- Prices move in trends.
- History tends to repeat itself.

Technical analysis uses charts of price movements along with technical indicators and oscillators to identify patterns that can suggest future price movements. Indicators are calculations that are used to confirm a price movement and to form buy and sell signals. Oscillators are another type of calculation that indicates whether a security is over-bought or over-sold.

One of the most important concepts in technical analysis is, therefore, trend. However, trends can be difficult to identify, as prices do not move in a straight line, and so technical analysis identifies series of highs or lows, in order to identify the direction of movements. These are classified as uptrend, downtrend and sideways movements. By following a trend (set by others, ie, buyers or sellers), then the end result can be self-fulfilling – it can give rise to the herd mentality, in which everyone is following each other. This trend of securities is referred to as 'momentum' (and momentum trading).

Trend

The diagrams below illustrate the concept of trend and some of the basic patterns that are observed.



- **Chart 1: Uptrend** – point 1 reflects the first high and point 2 the subsequent low. For it to be an uptrend, each successive low must be higher than the previous low point, otherwise it is referred to as a reversal. The same principle applies for downtrends.
- **Chart 2: Trendline** – Along with direction, technical analysis will also classify trends based on time or a trendline. Primary movements are long-term price trends, which can last a number of years. Primary movements in the broader market are known as bull and bear markets: a **bull market** being a rising market and a bear market a falling market. Primary movements consist of a number of secondary movements, each of which can last for up to a couple of months, which in turn comprise a number of tertiary or day-to-day movements.
- **Chart 3: Triangle** – Technical analysis charts also contain channel lines, which is where two parallel lines are added to indicate the areas of support and resistance which respectively connect the series of lows and highs (mote that the price movements are becoming progressively less volatile over time). Users of technical analysis will expect a security to trade between these two levels until it breaks out, when it can be expected to make a sharp move in the direction of the break – these movements are known as breakouts. If a support level is subsequently broken, this provides a sell signal. As the price of the asset gathers momentum, it could breach a **resistance level**, which indicates a buying opportunity.
- **Chart 4: Head and Shoulders** – Acknowledging that prices do not always move in the same direction and trends eventually cease, technical analysts also look to identify what are known as reversal patterns, or buy/sell signals. Probably the most famous of these is the head and shoulders reversal pattern, as this example illustrates.

In addition, technical analysts will also monitor volume, momentum, moving averages and other indicators.

- Volume indicators are used to determine the interest level of investors in the market or a security at a particular level. High volume, especially near important market levels, can suggest the start of a new trend, whilst low volume might indicate less support.
- Momentum indicators are used to attempt to understand the rate at which a price is changing and the strength of that movement. Common measures include the relative strength index and moving average convergence. Momentum indicators can identify changes in buying and selling behaviour and generate trading signals. For example, a bullish divergence occurs when the price moves lower, but the momentum indicator is moving higher and may indicate that whilst the price is falling, the price trend may reverse whilst a bearish divergence may occur when the price moves higher, but the momentum indicator is lower suggesting that buying interest is slowing and the trend may reverse to the downside.

You may want to undertake your own research to see visual examples of these and other indicators.

6.3 The Difference between Fundamental and Technical Analysis

Fundamental and technical analysis are the two main methodologies used for investment analysis and, as you can see from comparing their key characteristics, they differ widely in their approaches.

The principal differences between them can be summarised as follows:

	Fundamental Analysis	Technical Analysis
Analysing financial statements versus charts	Involves analysis of the company's statement of financial position (balance sheet), statement of financial income (income statement) and statement of cash flows (cash flow statement).	Believes that the company's fundamentals all are accounted for in the price, and the information needed can be found in the company's charts.
Time horizon	Takes a relatively long-term approach to investment.	Uses chart data over a shorter timeframe of weeks, days or even minutes.
Investing vs trading	Often used to make long-term investment decisions.	Often used to determine short-term trading decisions.

Although the approaches adopted by technical and fundamental analysis differ markedly, they should not be seen as being mutually exclusive techniques. Indeed, their differences make them complementary. Used collectively, they can enhance the portfolio management decision-making process.

Some investment managers would combine both styles of analysis: fundamental analysis to identify which security to buy or sell, and technical analysis to help decide on when to deal (execute the order to buy or sell the security). As an example, fundamentally a security could be a buy based on long-term assumptions and value, but technically, indicators may not support the purchase just yet due to low volume of buyers of the security. Thus, there is a lack of momentum to support the decision to buy or sell today.

7. Yields and Ratios

The financial statements and associated explanatory notes issued by a company contain a significant amount of data that needs to be turned into meaningful numbers. These can then be used for assessing the profitability of a company, the risks attached to those earnings, its ability to meet its liabilities as they fall due and to identify trends. We now turn, therefore, to look at the range of yields and ratios that can be used as part of fundamental analysis.

7.1 Profitability Ratios

Learning Objective

5.6.1 Understand the purpose of the following key ratios: Return on Capital Employed (ROCE); asset turnover; net profit margin; gross profit margin

Profitability ratios are used to assess the effectiveness of a company's management in employing the company's assets to generate profit and shareholder value. A wide range of ratios is used, but in this section, we will just consider return on capital employed (ROCE), asset turnover and profit margins.

7.1.1 Return on Capital Employed (ROCE)

Return on Capital Employed (ROCE) is a key measure of a company's profitability and looks at the returns that have been generated from the total capital employed in a company – that is, debt as well as equity.

It expresses the income generated by the company's activities as a percentage of its total capital. This percentage result can then be used to compare the returns generated to the cost of borrowing, establish trends across accounting periods and make comparisons with other companies.

It is calculated as follows:

$$\text{Return on capital employed} = \frac{\text{Profit before interest and tax}}{\text{Capital employed}}$$

The component parts of capital employed are shown below in an expanded version of the formula:

$$\text{ROCE} = \frac{\text{Profit before interest and tax}}{(\text{Total assets} - \text{Current liabilities} + \text{Short-term borrowing})}$$

When looking at ROCE, capital employed takes into account the financing available to a company that is used to generate profit and so includes shareholder funds, loan capital and bank overdrafts. Although bank overdrafts are a current liability, they are also normally considered to be financing activities similar to long-term borrowings and that is why bank overdrafts are added back in.

Capital employed can be calculated by looking at either the assets or liabilities side of the balance sheet and so the formula can be seen as either:

- capital employed = total assets – current liabilities + bank overdrafts, or
- capital employed = shareholder funds + loan capital + bank overdrafts.

It should be noted that the result can be distorted inter alia in the following circumstances:

- The raising of new finance at the end of the accounting period, as this will increase the capital employed but will not affect the profit figure used in the equation.
- The revaluation of fixed assets during the accounting period, as this will increase the amount of capital employed, while also reducing the reported profit by increasing the **depreciation charge**.
- The acquisition of a subsidiary at the end of the accounting period, as the capital employed will increase, but there will not be any post-acquisition profits from the subsidiary to bring into the consolidated profit and loss account.

7.1.2 Asset Turnover and Profit Margin

A more detailed analysis of ROCE can be undertaken by breaking this formula down further into two secondary ratios: asset turnover and profit margin.

Asset turnover looks at the relationship between sales and the capital employed in a business. It describes how efficiently a company is generating sales by looking at how hard its assets are working (ie, how effectively a company's assets have been utilised over the accounting period).

Profit margin looks at how much profit is being made for each 'unit of currency' worth of sales (ie, how effective its price and cost management have been in the face of industry competition). The higher the profit margin, the better. Further, high or improving profit margins may attract other firms into the industry, depending on the existence of industry barriers to entry, thereby driving down margins in the long run.

The relationship between ROCE and each of these can be shown as follows:

$$\text{ROCE} = \frac{\text{Profit before interest and tax}}{\text{Capital employed}}$$

$$\text{Profit margin} = \frac{\text{Profit before interest and tax}}{\text{Sales}} \qquad \text{Asset turnover} = \frac{\text{Sales}}{\text{Capital employed}}$$

Example

Assume ABC ltd has sales of $5m, a trading profit of $1.5m and the following items on its balance sheet:

- Share capital $1.0m
- Reserves $5.0m
- Loans $1.0m
- Overdraft $0.5m

So, its ROCE, profit margin and asset turnover can be calculated as follows:

ROCE:

$$\frac{\text{Profit before interest and tax}}{\text{Capital employed}} \quad \text{or} \quad \frac{\$1.5\text{m}}{(\$1.0\text{m} + 5.0\text{m} + \$1.0\text{m} + \$0.5\text{m})} \times 100 = 20\%$$

Profit Margin:

$$\frac{\text{Profit before interest and tax}}{\text{Sales}} = \frac{\$1.5\text{m}}{\$5\text{m}} \times 100 = 30\%$$

Asset Turnover:

$$\frac{\text{Sales}}{\text{Capital employed}} = \frac{\$5\text{m}}{\$7.5\text{m}} = 0.67 \text{ times}$$

Profit margin and asset turnover can, therefore, be used in conjunction with ROCE to gain a more comprehensive picture of how a company is performing. The results of the calculations will then need interpreting to determine whether they represent a positive picture, which will depend upon the returns being achieved by comparable firms operating in the same or similar industries.

7.1.3 Gross, Operating and Net Profit Margin

Various profit margins can be looked at to analyse the profitability of a company in order to determine if it is both liquid and being run efficiently.

The gross profit margin shows the profit a company makes after paying for the cost of goods sold. It shows how efficient the management is in using its labour and raw materials in the process of production. The formula for gross profit margin is:

$$\text{Gross profit margin (\%)} = (\text{Gross profit/revenues}) \times 100$$

Firms that have a high gross profit margin are more liquid and so have more cash flow to spend on research and development expenses, marketing or investing. Gross profit margins need to be compared with industry standards to provide context and should be analysed over a number of accounting periods.

The operating profit margin shows how efficiently management is using business operations to generate profit. It is calculated using the formula:

$$\text{Operating profit margin (\%)} = (\text{Operating profit/revenues}) \times 100$$

The higher the margin the better, as this shows that the company can keep its costs under control and can mean that sales are increasing faster than costs and the firm is in a relatively liquid position.

The difference between gross and operating profit margin is that the gross profit margin accounts for just the cost of goods sold, whereas the operating profit margin accounts for the cost of goods sold and administration/selling expenses.

The net profit margin analyses profitability further by taking into account interest and taxation. Again, it needs to be compared to industry standards to provide context. The formula for calculating it is:

$$\text{Net profit margin (\%)} = (\text{Net income/revenues}) \times 100$$

With net profit margin ratio, all costs are included to find the final benefit of the income of a business and so measures how efficient a company has been overall in improving profits for its shareholders. It is one of the most essential financial ratios as it includes all the factors that influence profitability, whether under management control or not. The higher the ratio, the more effective a company is at cost control. Compared with industry average, it tells investors how well the management and operations of a company are performing against its competitors. Compared with different industries, it tells investors which industries are relatively more profitable than others.

7.2 Debt Ratios

Learning Objective

5.6.2 Understand the purpose of the following gearing ratios: financial gearing; interest cover

Debt ratios are used to determine the overall financial risk that a company and its shareholders face. In general, the greater amount of debt that a company has, the greater the risk of bankruptcy.

7.2.1 Financial Gearing

Investors prefer consistent earnings growth, or high quality earnings streams, to volatile and unpredictable earnings. The quality of this earnings stream is dependent upon whether the company's business is closely tied to the fortunes of the economic cycle. It also depends on the level of a company's **financial gearing**, or capital structure. It is also important to know how this debt is being used, such as to fund new business ventures where the **internal rate of return** (future value) will exceed the interest payments, or just to fund a dividend payment.

A company's financial gearing (alternatively termed leverage) describes its capital structure, or the ratio of debt-to-equity capital it employs.

Financial gearing is also known as the debt-to-equity ratio and is calculated as follows:

$$\text{Debt-to-equity ratio} = \frac{(\text{Interest-bearing debt} + \text{Preference shares})}{\text{Ordinary shareholders' equity}}$$

Preference shares are included in the debt part of the calculation as preference share dividends take priority over the payment of equity dividends.

A company's financial gearing can also be expressed in net terms by taking into account any cash held by the company, as this may potentially be available to repay some of the company's debt.

Debt finance can enhance a company's earnings growth, as it is a more tax efficient and generally less expensive means of financing than equity capital. If it is excessive, however, it can also lead to an extremely volatile earnings stream, given that debt interest must be paid regardless of the company's profitability.

Analysts need to be aware where growth and revenues have come from. Is it from better use of capital and resources, or because the company keeps borrowing money and thereby its interest costs go up?

There are also different effects of funding from shares, or fixed or floating rate debt. They all come with costs and during times of low interest rates, floating rate debt could be the preferable option, as this could be used to buy back bonds or shares. However, at times of higher interest rates, debt is expensive and hence shares or fixed-rate bonds of the company could be a cheaper way to fund growth opportunities.

7.2.2 Interest Cover

Shareholders and prospective lenders to the company will also be interested in the company's ability to service, or pay the interest on, its interest-bearing debt. The effect of a company's financial gearing policy on the profit and loss account is reflected in its interest cover which is calculated as follows:

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

The higher the interest cover that a company has, the better the financial health of the company, thus the greater the safety margin for its ordinary shareholders. This means that the company has more scope to raise additional loan finance without dramatically impacting its ability to service the required interest payments or compromise the quality of its earnings stream.

At the same time, an interest cover that is too high can indicate that the company is not using its debt property, or it is not using its debt properly, or it is perhaps not borrowing enough. An interest cover of 1.5 or less indicates that its ability to meet interest expenses may be questionable, thus the greater the possibility of default or bankruptcy.

This ratio requires careful interpretation as it is susceptible to changes in the company's capital structure and general interest rate movements, unless fixed-rate finance or interest rate hedging is employed.

7.3 Liquidity Ratios

Learning Objective

5.6.3 Understand the purpose of the following liquidity ratios: working capital (current) ratio; liquidity ratio (acid test); cash ratio; Z-score analysis

A company's survival is dependent upon both its profitability and its ability to generate sufficient cash to support its day-to-day operations. This ability to pay its liabilities as they become due is known as liquidity, and it can be assessed by using the current ratio and the acid test.

7.3.1 Current (Working Capital) Ratio

The current ratio, as it is most commonly referred to, is also known as the working capital ratio.

The current ratio is simply calculated by dividing a company's current assets by its current liabilities as follows:

$$\text{Current ratio}(\text{x}) = \frac{\text{Current assets}}{\text{Current liabilities}}$$

If the current ratio is 1x, then the company's assets equal its liabilities, meaning that the company has sufficient liquid assets to cover its debts that are falling due within a year. Thus, a current ratio below 1x may indicate liquidity problems for the company. A current ratio higher than 1x should be preferred; and a 'good' current ratio is typically between 1.2x and 2x (it should be noted, though, that acceptable current ratios vary from industry to industry).

Although a company will want to hold sufficient stock to meet anticipated demand, it must also ensure that it does not tie up so many resources as to compromise its ability to increase profits or meet its liabilities. Therefore, the higher the result, the more readily a company should be able to meet its liabilities that are becoming due and still fund its ongoing operations. That said, if the current ratio is too high, it may indicate that the company is not using its current assets or its short-term financing facilities efficiently.

7.3.2 Liquidity Ratio (Quick Ratio or Acid Test)

The liquidity ratio (also known as the quick ratio or the acid test) is similar to the current ratio except that it excludes stock from the 'current assets' part of the calculation, as stock is potentially not liquid. In doing so, this gives a tighter measure of a company's ability to meet a sudden cash call.

The formula for the liquidity ratios is as follows:

$$\text{Liquidity ratio}(\text{x}) = \frac{\text{Current assets} - \text{Stock}}{\text{Current liabilities}}$$

For most industries, a ratio of more than one will indicate that a company has sufficient short-term assets to cover its short-term liabilities. If it is less than one, it may indicate the need to raise new finance.

7.3.3 Cash Ratio

This is the ratio of a company's total cash and cash equivalents to its current liabilities and is used as a measure of company liquidity. It can therefore determine if, and how quickly, the company can repay its short-term debt. A strong cash ratio is useful to creditors when deciding how much debt, if any, they would be willing to extend to the asking party.

$$\text{Cash ratio} = \frac{\text{Cash} + \text{Cash equivalents} + \text{Invested funds}}{\text{Current liabilities}}$$

The cash ratio is generally a more conservative look at a company's ability to cover its liabilities than many other liquidity ratios. This is due to the fact that inventory and accounts receivable are left out of the equation. Since these two accounts are a large part of many companies, this ratio should not be used in determining company value, but simply as one factor in determining liquidity.

7.3.4 Z-Score Analysis

An Altman Z-score analysis (or, simply, Z-score analysis) is generally considered to be a more detailed way of establishing whether a company is dangerously close to becoming insolvent.

A Z-score analysis is undertaken to determine the probability of a company going into liquidation by analysing factors such as the company's gearing and sales mix and distilling these into a statistical Z-score.

Typically, an Z-score of 1.8 or below suggests that the company is in financial distress, and there is a high probability that it will go bankrupt; other danger signals include an increased use of leased assets and an overdependence on one customer. If the Z-score is negative, this implies that the company's insolvency is imminent.

Conversely, a score of 3 or above suggests that the company is in a solid financial position.

An Z-score of between 1.8 and 3 suggests that the company is not in immediate financial distress, but it is also not in a particularly robust financial position. Hence, it is in a sort of grey area where caution might be warranted, and further analysis would be needed to assess its financial health accurately.

7.4 Investment Valuation Ratios

Learning Objective

5.6.4 Understand the purpose of the following investors' ratios: earnings per share (EPS); earnings before interest, tax, depreciation, and amortisation (EBITDA); earnings before interest and tax (EBIT); historic and prospective price earnings ratios (PERs); dividend yields; dividend cover; price to book

We will now consider some of the ratios that are used to assess potential investments.

7.4.1 Earnings per Share (EPS)

Earnings per share (EPS) is a measure of a company's profits (after all expenses and payments have been made) that are available to ordinary shareholders, expressed as an amount per share. The figure allows analysts and traders to gauge the financial strength of the company relative to its own history and with other, similar companies.

EPS is calculated as follows:

$$\text{EPS} = \frac{\left(\text{Net income} - \text{Preference dividends}\right)}{\text{Number of ordinary shares in issue}}$$

The resulting figure is known as the basic EPS.

The quality of a company's earnings stream and its ability to grow its EPS in a consistent manner are probably the most important factors affecting the price of a company's shares, not least because earnings provide the ability to finance future operations and the means to pay dividends to shareholders.

Alongside EPS, there are two other principal measures that we need to consider:

- earnings before interest and tax (EBIT), and
- earnings before interest, tax, depreciation and **amortisation** (EBITDA).

Earnings Before Interest and Tax (EBIT)

Earnings per share can also be calculated before the impact of interest payments and taxation. EBIT is, therefore, operating income or operating profit.

In other words, it measures of a company's profitability, before taking into account the effects of financing expenses. In doing so, EBIT provides a clearer picture of a company's operational performance and profitability from its core business activities.

EBIT is calculated as follows:

$$\text{EBIT} = \text{Revenue} - \text{Operating expenses}$$

Operating expenses typically include costs directly associated with producing and selling goods or services, as well as the general overhead costs necessary to run the business.

EBIT makes it easier for investors and analysts to compare the profitability of different companies within the same industry or sector.

Earnings Before Interest, Taxes, Depreciation and Amortisation (EBITDA)

As its name suggests, EBITDA analyses a company's earnings before taking any financial, taxation and accounting charges into consideration. EBITDA also allows us to compare company earnings internationally, as the earnings picture is not clouded by differences in accounting standards.

EBITDA is calculated by taking a company's net income and adding back interest, taxes, depreciation and amortisation expenses, as follows:

$$\text{EBITDA} = \text{Net income} + \text{Interest} + \text{Taxes} + \text{Depreciation} + \text{Amortisation}$$

Depreciation and amortisation are similar concepts in accounting, in that both involve writing down the value of assets over time to reflect their gradual consumption or expiration of economic useful life. However, there are differences between them – depreciation relates to tangible assets with physical substance (eg, buildings and machinery), while amortisation applies to intangible assets (eg, patents and goodwill).

By excluding these specific expenses, EBITDA provides a more standardised measure of a company's operating performance. It is particularly useful for comparing companies across different industries and regions, since it ignores variations in accounting practices and tax rates.

Importantly, though, EBITDA has its limitations. For example, it does not necessarily provide a complete picture of a company's financial health, since it excludes interest and taxes, as well as other important expenses. Additionally, EBITDA can be manipulated by management to present a more favourable view of the company's performance. Therefore, while EBITDA can be a helpful metric, it should be used in conjunction with other financial measures to get a comprehensive understanding of a company's financial health.

7.4.2 Price/Earnings (P/E) Ratio

The price/earnings ratio (also called the price-to-earnings, P/E ratio or PER) measures how highly investors value a company in its ability to grow its income stream.

It is calculated by dividing the market price by the EPS as follows:

$$\text{P/E ratio (x)} = \frac{\text{Share price}}{\text{EPS}}$$

A company with a high P/E ratio relative to its sector average reflects investors' expectations that the company will achieve above-average growth. By contrast, a low P/E ratio indicates that investors expect the company to achieve below-average growth in its future earnings.

Example

XYZ plc is operating in a sector where the average prospective P/E ratio is currently 8x (ie, 8 times). If XYZ's EPS is expected to be $0.30, then the implied value of an XYZ plc share is: PER x expected EPS = 8 x $0.30 = $2.40.

Although P/E ratios differ significantly between markets and industries, there could be several reasons why a company has a higher P/E ratio than its industry peers, apart from its shares simply being overpriced. These may include:

- A greater perceived ability to grow its EPS more rapidly than its competitors.
- Producing higher-quality or more reliable earnings than its peers.
- Experiencing a temporary fall in profits.

One way of establishing whether a company's P/E is justified is to divide it by a realistic estimate of the company's average earnings growth rate for the next five years. A number of less than 1 indicates that the shares are potentially attractive. This is sometimes referred to as the price/earnings-to-growth (PEG) ratio.

It is also important to establish how a P/E has been calculated to ensure that appropriate comparisons can be made. The main two encountered are:

- **historical P/E ratios** – which are based on the last reported annual earnings, and
- **prospective P/E ratios** – which are based on forecasted earnings.

7.4.3 Dividend Yields and Dividend Cover

One major reason for buying shares is the dividend paid on the shares, and investors will want to have a measure that allows them to compare the dividend paid on one company's shares with that of another's, or with alternative investments such as bonds and cash deposits.

Dividend yields give investors an indication of the expected return on a share, so that it can be compared to other shares and other investments. They are calculated by dividing the net dividend by the share price, as follows:

$$\text{Dividend yield (\%)} = \frac{\text{Net dividend per share}}{\text{Share price}}$$

$$\text{Dividend cover (x)} = \frac{\text{EPS}}{\text{Net dividend per share}}$$

Generally speaking, a dividend cover of 2x or higher is considered prudent, in that the company is perceived to be able to afford the dividend. An unusually high dividend cover implies that the company is retaining the majority of its earnings, presumably with the intention of reinvesting for further growth. This is common among companies which are still in a high growth phase, rather than more mature companies which are often expected to pay regular dividends.

A ratio below 1.5x might, however, may suggest a less sustainable dividend. If the ratio is less than 1x then the company is paying a dividend, which is greater than the year's earnings. The company is funding part of its dividend using earnings retained from previous years (ie, past reserves) and is said to be paying an uncovered dividend. This is more likely to be a cause for investor concern.

7.4.4 Price-to-Book Ratio

The price-to-book (P/B) ratio measures the relationship between the company's share price and the net book, or asset value per share attributable to its ordinary shareholders. In theory, a stock's tangible book value per share represents the amount of money an investor would receive for each share if a company were to cease operations and liquidate all of its assets at the value recorded on the company's accounting books.

Thus, the P/B ratio is commonly used to value financial companies because earnings may not be a sufficient indicator of the future prospects of those companies.

$$\text{P/B (x)} = \frac{\text{Share price}}{\text{Net asset value (NAV) per share}}$$

Note that a company's NAV per share, attributable to its ordinary shareholders, is arrived at by dividing the net assets by the number of shares in issue. The NAV per share is useful for assessing:

- the minimum price at which a company's shares should theoretically trade
- the underlying value of a property company, and
- the underlying value of an investment trust (see section 1.3.4 of chapter 4).

Similar to the P/E ratio, the P/B ratio indicates that a stock is a better value when it is lower.

A stock is usually considered to be priced at **fair value** when the P/B is 1x. If the ratio is less than 1x (ie, the share price is less than the NAV per share), this indicates that the market is undervaluing the company; and because the shares are currently selling at a discount to their fair value, this presents a good buying opportunity, or it could be a sign that there is (or the market sees) something fundamentally wrong with the company.

Conversely, P/B ratio of greater than 1x (ie, the share price is greater than the NAV per share) suggests that the shares are trading at a premium to the company's book value, perhaps because investors view it as a company with above-average growth potential.

The P/B ratio only works well when analysing companies that have high levels of tangible assets; it is less helpful when looking at those that have large amounts of goodwill or intellectual property on their statement of financial position. The ratio should be interpreted with care and never be used as a stand-alone measure to pinpoint undervalued companies.

8. Valuation

Learning Objective

5.7.1 Know the basic concept behind: economic value added (EVA); market value added (MVA); dividend valuation model including Gordon growth model

The final strand of fundamental analysis to be considered is that of equity valuation.

A company's shares would normally be expected to trade at a premium to their NAV, because of the internally generated goodwill attributable to the company's management, market positioning and reputation that is not capitalised in the company's balance sheet.

NAV per share is not useful for assessing the value of service- or people-orientated businesses that are driven by intellectual, rather than physical, capital value, because this cannot be capitalised in the balance sheet. Instead, other valuation models are used, such as the Gordon growth model.

8.1 Gordon Growth Model

The dividend valuation model applies a theoretical price to a company's shares by discounting the company's expected flow of future dividends into infinity.

In other words, it uses the same formula that we considered in section 5.3.3 of this chapter to calculate the present value of a perpetuity and instead uses it to calculate the value of a share. The required rate for the formula is derived by adjusting the risk-free rate given by a Treasury bill or stock for the relative risk of the investment.

Example

ABC plc is expected to pay a dividend of 10p next year. Assuming the required return of return to equity holders is, and is expected to remain at, 11%, then the share price should be:

$$\text{Share price} = \frac{D}{k} = \frac{£0.10}{0.11} = £0.91$$

where:
D = the dividend in one year's time
k = the required rate of return to the equity holders

However, this formula takes no account of the potential for rising dividends. This gives rise to the Gordon growth model, which assumes that future dividends will grow at a constant rate.

Example

Assuming ABC plc's dividends are expected to grow at a constant rate of 5%, the share price should be:

$$\text{Share price} = \frac{D}{k - g} = \frac{£\ 0.10}{0.11 - 0.05} = £1.67$$

where:
D = the dividend in one year's time
k = the required rate of return for equity investors
g = growth rate in dividends in perpetuity

8.2 Shareholder Value Models

The approach taken by shareholder value models is to establish whether a company has the ability to add value for its ordinary shareholders by earning returns on its assets in excess of the cost of financing these assets.

Economic Value Added (EVA)

Economic value added (EVA) is the most popular of these shareholder value approaches.

The EVA for any single accounting period is calculated as follows:

$$EVA = NOPAT - (\text{Invested capital} \times WACC)$$

where:

NOPAT = net operating profit after taxes
Invested capital = debt + capital leases + shareholders' equity (ie, an adjusted net figure from the company's balance sheet)
WACC = weight average cost of capital

If the result is positive, then value is being added; and if negative, value is being destroyed.

It should be noted that EVA:

- is based on accounting profits and accounting measures of capital employed
- only measures value creation or destruction over one accounting period, and
- in isolation cannot establish whether a company's shares are overvalued or undervalued.

Market Value Added (MVA)

In order to determine whether a company's shares are correctly valued, the concept of market value added (MVA) needs to be employed.

A company's MVA is the market's assessment of the present value of the company's future annual EVAs. It is calculated as follows:

$$MVA = V - K$$

where:

V = the market value of the company (including the value of the firm's equity and debt)

K = the total amount of capital invested in the company

Quite simply, if the present value of the company's future annual EVAs, discounted at the company's WACC, is greater than that implied by the MVA, this implies that the company's shares are undervalued, and vice versa, if less than the MVA.

Like EVA, MVA also relies on accounting values to establish the invested capital figure, and in addition it requires analysts to forecast EVAs several years into the future to determine whether the resultant MVA is reasonable.

End of Chapter Questions

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

1. **List three factors that determine the trend rate of economic growth.**
   Answer reference: Section 1.3

2. **What is a fiat currency?**
   Answer reference: Section 1.8.1

3. **Name four ways in which central banks can influence the availability of money in the economy?**
   Answer reference: Section 2

4. **Name four key responsibilities of central banks.**
   Answer reference: Section 2.1

5. **What type of goods has an income elasticity of demand (YED) greater than one?**
   Answer reference: Section 3.2.3

6. **In economics, what is the main difference between the short run and the long run when analysing the behaviour of a firm's costs?**
   Answer reference: Section 3.3.2

7. **Why is the existence of supernormal profits in a perfectly competitive industry only a temporary phenomenon?**
   Answer reference: Section 3.4.1

8. **Explain the difference between the mean, median and mode. Which method is more appropriate when summarising data?**
   Answer reference: Section 4.1.1

9. **Define the term 'variance'.**
   Answer reference: Section 4.1.2

10. **What is the relationship between the correlation coefficient and the covariance?**
    Answer reference: Section 4.2.1

11. **Which analysis would explain the intrinsic value of a company?**
    Answer reference: Section 6.1

12. **In technical analysis, what is a primary movement?**
    Answer reference: Section 6.2

13. **Following on from technical analysis, what does a trendline tell an investor?**
    Answer reference: Section 6.2

14. How can the trend in a company's return on capital employed (ROCE) be distorted?

Answer reference: Section 7.1.1

15. Define the term 'financial gearing'.

Answer reference: Section 7.2.1

16. Why would someone undertake an Z-score analysis?

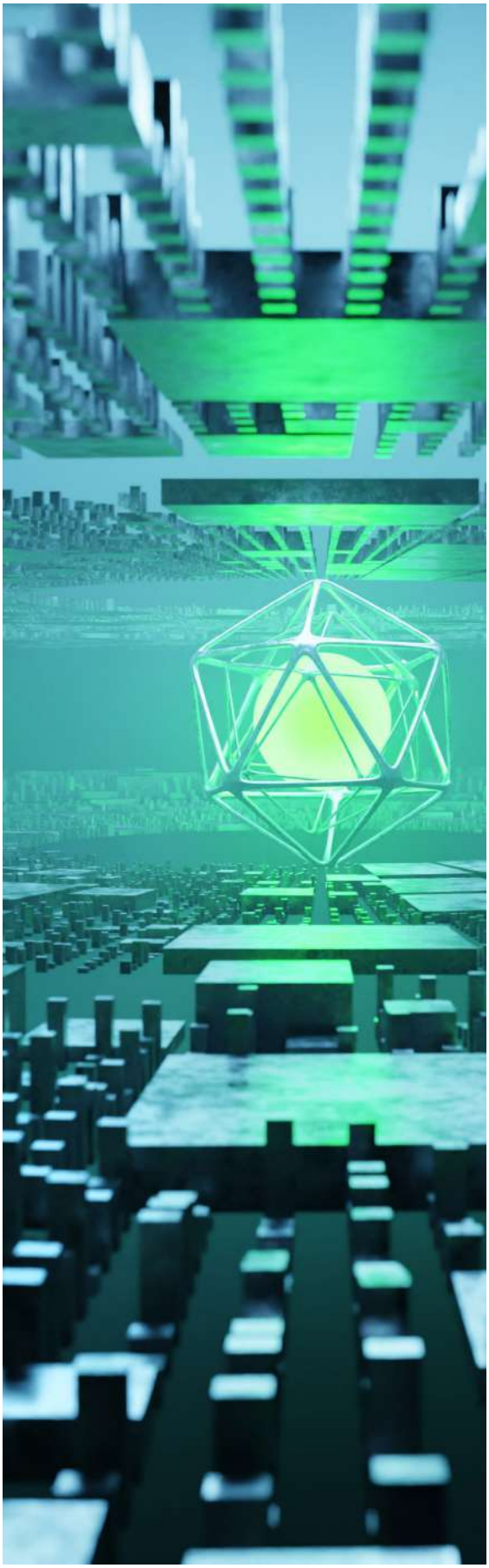
Answer reference: Section 7.3.4

Chapter Six

Investment Management

1. **Portfolio Construction Theories** 221
2. **Investment Strategies** 231
3. **The Role of Asset Classes and Funds in a Portfolio** 249
4. **Risk and Return** 260
5. **Performance Measurement** 267

This syllabus area will provide approximately 15 of the 100 examination questions



1. Portfolio Construction Theories

This section looks at the financial theory which, over the past 50 years or more, has had a pronounced effect on the construction of investment portfolios.

1.1 Modern Portfolio Theory (MPT)

Learning Objective

6.2.1 Know the main principles of modern portfolio theory (MPT) and the efficient market hypothesis (EMH)

For most investors, the primary risk from holding a stock is that the returns will be lower than expected.

Modern portfolio theory (MPT) states that by combining securities into a diversified portfolio, the overall risk will be less than the risk inherent in holding any one individual stock and so reduce the combined variability of their future returns.

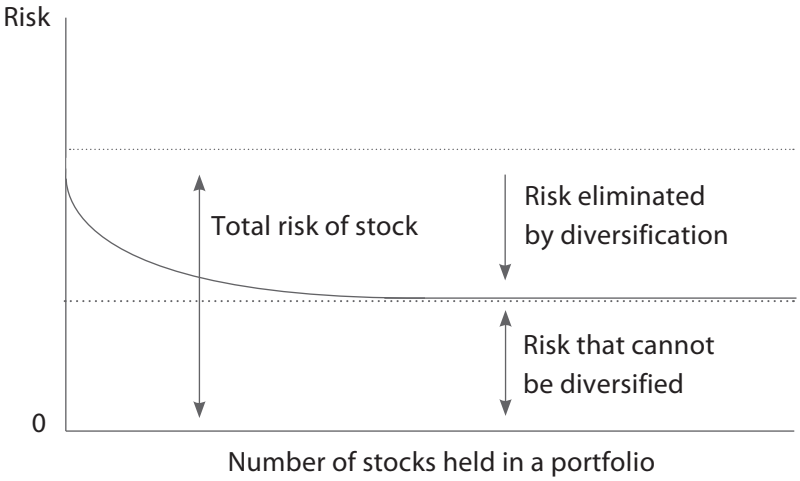
The theory originated from the work of US academic Harry Markowitz in 1952, and introduced a whole new way of thinking about portfolio construction. In particular, it introduced the concept of efficient (or diversified) portfolios.

MPT states that the risk for individual stocks consists of:

- **Systematic risk** – these are market risks that cannot be diversified away; hence, it is also referred to as undiversifiable risk or market risk.
- **Unsystematic risk** – this is the risk associated with a specific stock and can be diversified away by increasing the number of stocks in a portfolio. Consequently, it is also called diversifiable risk or stock-specific risk.

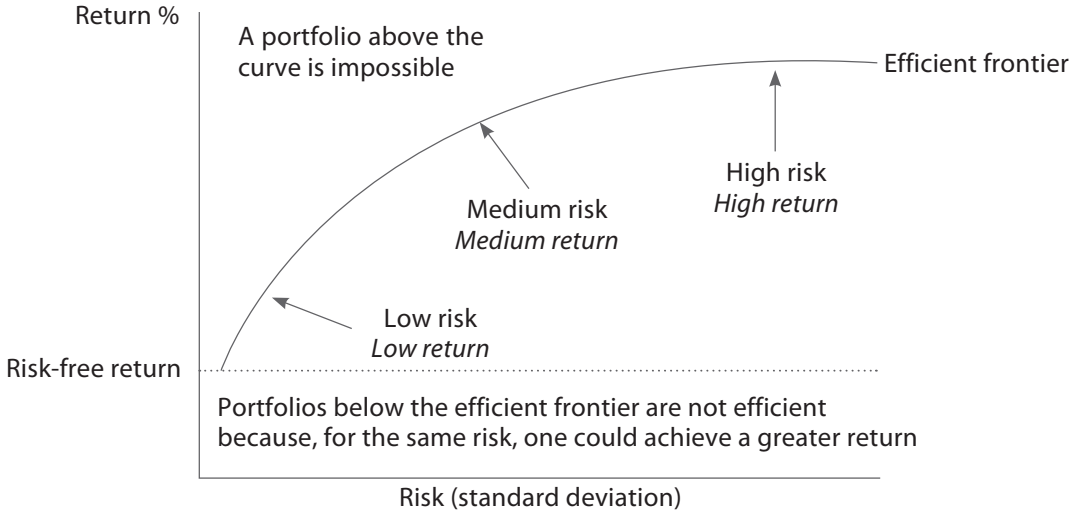
Note that these terms should be distinguished from systemic risk, which relates to the health of financial institutions and refers to the risk of breakdown of the financial system.

A well-diversified portfolio will reduce the risk that its actual returns will be lower than expected. According to MPT, a portfolio of 15-20 stocks across a range of sectors is enough for it to be well-diversified.



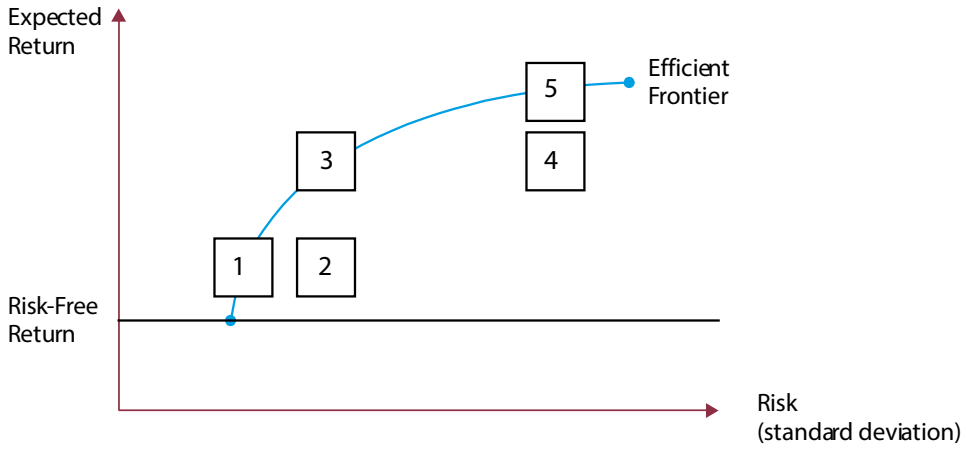
This then leads on to how to identify the best level of diversification and is described by the **efficient frontier**. The inputs to the efficient frontier model are the:

- return of each asset
- standard deviation of each asset's returns, and
- correlation between each pair of asset's returns.



According to MPT, a rational investor will only ever hold a portfolio that lies somewhere on the efficient frontier. The chart shows that it is possible for different portfolios to have different levels of risk and return. Each investor decides how much risk they can tolerate and diversifies their portfolio accordingly. The optimal risk portfolio is usually determined to be somewhere in the middle of the curve because, as you go up the curve, you take on proportionately higher risk for lower incremental returns. Equally,

positioning a portfolio at the low end of the curve is pointless, as you can achieve a similar return by investing in risk-free assets.
The efficient frontier plots the risk/reward profiles of various portfolios and displays the best return that can be achieved for a given level of risk or the lowest level of risk needed to achieve a given return. A simple example of this is shown below.



The diagram shows five different portfolios and, from the efficient frontier, we can see that:

- Portfolio 1 is a better choice than portfolio 2 as it offers the same level of return, but at a lower level of risk.
- Portfolio 3 is a better choice than portfolio 2 as it offers a higher level of return for the same level of risk.
- Portfolio 3 is a better choice than portfolio 4 as it offers the same level of return, but at a lower level of risk.
- Portfolio 5 is a better choice than portfolio 4 as it offers a higher level of return for the same level of risk.

It is not possible to say which is the best choice from all of the portfolios, as the portfolio selected will depend on the objectives and risk profile of the investor. For example, portfolio 1 offers a low-risk low-return strategy while portfolios 3 and 5 offer higher returns, but with higher risk. The use of an efficient frontier has various limitations, which include:

- It assumes that standard deviation is the correct measure of risk and that assets have normally distributed returns.
- The inputs to the model rely on historical data which may not be stable especially during a financial crisis.
- It assumes that the underlying portfolios in each asset class are effectively index funds with the same characteristics as the input data.
- The model does not include transaction costs and investors may not be willing to change their portfolios as often as the model might recommend.

Since its origins in the early 1950s, this basic portfolio selection model has been developed into more sophisticated models, such as the capital asset pricing model (CAPM) in the mid-1960s and arbitrage pricing theory (APT) in the late 1970s. Regardless, MPT remains the backbone of finance theory and practice. CAPM and APT are considered in sections 1.3 and 1.4.

1.2 The Efficient Market Hypothesis (EMH)

The **efficient market hypothesis (EMH)** is a highly controversial and often disputed theory, which states that it is impossible to beat the market because prices already incorporate and reflect all relevant information. Hence, there are two main ways to invest: active management or **passive management**.

The EMH relies on a number of key assumptions that underpin most finance theory models. For example, aside from investors being rational and risk-averse, they are also assumed to possess a limitless capacity to source and accurately process freely available information.

Under EMH, market efficiency can be analysed at three levels, each of which have different implications for how markets work.

- **Weak form** – security prices fully reflect past share price and trading volume data. As a consequence, successive future share prices should move independently of this past data in a random fashion, thereby nullifying any perceived informational advantage from adopting technical analysis to analyse trends.
- **Semi-strong form** – share prices reflect all publicly available information and react instantaneously to the release of new information. Consequently, no excess return can be earned by trading on that information and neither fundamental nor technical analysis (see chapter 5, section 5) will be able to reliably produce excess returns.
- **Strong form** – share prices reflect all available information (both public and private), so no one can earn excess returns. Insider dealing laws prevent holders of material inside information from trading on it; these laws should therefore make strong form efficiency impossible, except where they are universally ignored.

Generally speaking, most established Western equity markets are relatively price efficient. Although testing for strong form efficiency is impossible as inside information would be required, the most conclusive evidence supporting the semi-strong efficient form of the EMH is that very few active portfolio managers produce excess returns consistently. However, pricing anomalies and trends do occasionally arise as a result of markets and individual securities under- and overshooting their fundamental values. As a consequence, some active managers do outperform their respective benchmarks, often in quite spectacular fashion.

The limitations of the theory can therefore be seen to include the following:

- Investors do not always invest in a rational fashion, thereby providing others with pricing anomalies to exploit.
- Investors frequently refer to past share price data (technical analysis), especially recent highs and lows, and the price they may have paid for a share (anchoring), as guides for judging the attractiveness of a particular share price, instead of fundamental analysis, which in turn influences their decision making.
- Not all market participants have the ability to absorb and interpret information correctly, given varying abilities and the way in which the information is presented.
- Stock market bubbles develop and eventually burst, which is a phenomenon that stands at odds with the EMH.
- Investors frequently deal in securities for reasons completely unrelated to investment considerations, such as raising cash or in following a trend.

1.3 Capital Asset Pricing Model (CAPM)

Learning Objective

6.2.2 Understand the assumptions underlying the construction of the capital asset pricing model (CAPM) and its limitations

The CAPM says that the expected return on a security or portfolio equals the rate on a risk-free security plus a risk premium and, if the expected return does not meet or beat this required return, the investment should not be undertaken. The decision is whether an investor should invest in a security (take on risk) or stay invested in the risk-free asset (eg, cash or a government bond issued by a financially stable country). The fund/portfolio manager needs to be generating a return above the risk-free return to justify the active management fee.

CAPM has some built-in assumptions:

- All investors want to achieve a maximum return for minimum risk.
- All investors borrow and lend at the same risk-free rate.
- All investors are well-diversified and specific risk has been diversified away.
- There are no tax or transaction costs to consider.
- Investors have the same expectations about the returns and standard deviations of all assets.

Using those assumptions, the CAPM is used to predict the expected or required returns to a security by using its systematic risk – in other words, its **beta**. Systematic risk is assessed by measuring beta, which is the sensitivity of a stock's returns to the return on a market portfolio and so provides a measure of a stock's risk relative to the market as a whole.

We can use a stock's beta in conjunction with the rate of return on a risk-free asset, and the expected return from the market to calculate the return we should expect from a security.

The CAPM formula is usually expressed as:

$$ER = R_f + \beta(R_m - R_f)$$

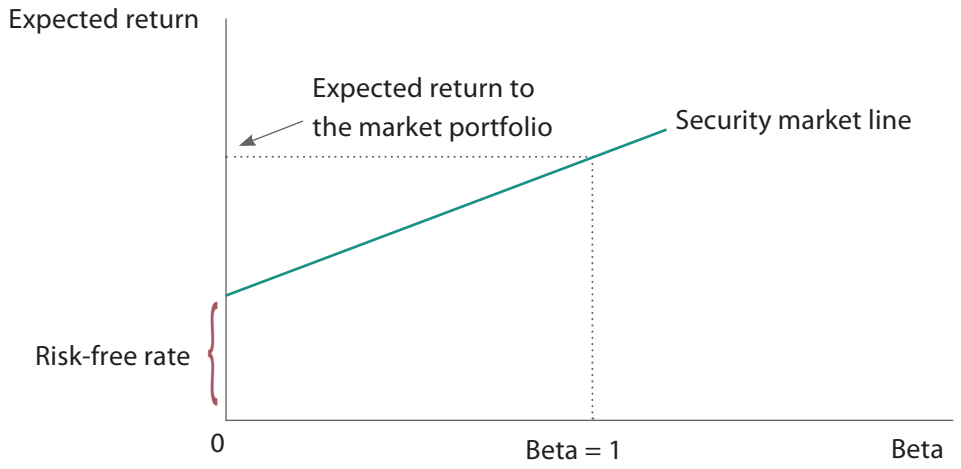
where:

ER = the expected return
R_f = the risk-free rate of return
β = beta
R_m = the return from the market, and R_m-R_f = the market premium.

This can be expressed more clearly as:

$$\text{Required return} = \text{risk-free rate} + \text{beta} \times (\text{market rate} - \text{risk-free rate})$$

Using the CAPM equation enables what is termed the security market line (SML) to be presented graphically. If a graph is plotted depicting the expected return from a security against its beta, then the relationship is revealed as a straight line.



The SML shows that the higher the risk of an asset, the higher the expected return. The market risk premium is the return an investor would expect over and above the risk-free rate as a reward for taking on the additional market risk.

Example

We can use the CAPM formula to calculate the return we should expect from a stock. For example, if the current risk-free rate is 5% and the expected return from the market is 10%, what return should we expect from a security that has a beta of 1.5?

The beta of the individual stock tells us that it carries more risk than the market as a whole, and the CAPM formula tells us that we should expect a return of:

$$\text{Required return} = 5\% + (10\% - 5\%) \times 1.5$$
$$= 12.5\%$$

By providing a precise prediction of the relationship between a security's risk and return, CAPM provides a benchmark rate of return for evaluating investments against their forecasted return.

However, CAPM has its limitations. For example, determining the appropriate risk-free rate and the suitability of using beta to estimate future risk can be challenging. Despite these limitations, CAPM is the foundation of many risk-adjusted measures of investment performance, as it provides relative data that helps towards understanding expected returns and their relationship to risk.

1.4 Arbitrage Pricing Theory (APT)

Learning Objective

6.2.3 Know the main principles behind arbitrage pricing theory (APT)

Arbitrage pricing theory (APT) was developed in the late 1970s in response to the CAPM's main limitation that a single market beta is assumed to capture all factors that determine a security's risk and expected return.

Rather than relying on a single beta, APT adopts a more complex multi-factor approach by:

- seeking to capture exactly what factors determine security price movements by conducting **regression analysis**
- applying a separate risk premium to each identified factor, and
- applying a separate beta to each of these risk premiums depending on a security's sensitivity to each of these factors.

Examples of factors that are employed by advocates of the APT approach include both industry-related and more general macroeconomic variables such as anticipated changes in inflation or industrial production and the yield spread between investment grade and non-investment grade bonds.

The underlying assumptions of the APT include the following:

- Securities markets are price efficient.
- Investors seek to maximise their wealth, though do not necessarily select portfolios on the basis of **mean-variance analysis**.
- Investors can sell securities short. Short selling is selling securities borrowed, but not owned with the intention of buying them back at a lower price in order to settle the loan and profit from the transaction.
- Identified factors are uncorrelated with each other.

The APT is attractive in that it:

- explains security performance more accurately than CAPM by using more than one beta factor
- uses fewer assumptions than the CAPM, and
- enables portfolios to be constructed that either eliminate or gear their exposure to a particular factor.

However, the APT's shortcomings include a reliance on:

- identified factors being uncorrelated with each other, and
- stable relationships being established between security returns and these identified factors.

1.5 Multi-Factor Models

In response to the limitations identified in these portfolio construction theories, multi-factor models have been developed and have come to dominate investment practice. They have proven valuable in helping asset managers to address practical tasks, and to measure and control risk.

Multi-factor models allow for different sensitivities to various factors and enable the identification of each factor's contribution to the security's return. These models typically consider a range of factors such as size, value, momentum, quality and volatility, which can help in diversifying risk and enhancing returns. By decomposing returns into these underlying factors, multi-factor models can help to provide an understanding of what drives performance and help in constructing more robust portfolios.

However, multi-factor models do not fully explain the behaviour of investors and markets, and this has led to continuing interest in behavioural finance. This is because they primarily focus on quantitative aspects, and often overlook the psychological and emotional factors that influence investment decisions.

1.6 Behavioural Finance

Learning Objective

6.2.4 Understand the concepts of behavioural finance: key properties; heuristics; prospect theory; cognitive illustrations

Traditional finance theory assumes that people make rational investment decisions as they choose between different asset classes in the light of prospective risk/return trade-offs, and that they think rationally about their overall risk/return objectives. Even for financial experts this task can be challenging so, for most people, the complexity of making asset allocation and security selection decisions according to rational conventional economic theory is problematic. In practice, emotion and psychology influence our decisions, causing us to act in unpredictable or irrational ways. Behavioural finance tries to combine what psychologists call cognitive behaviour with conventional financial theory to better understand how we make decisions.

Advocates of behavioural finance assert that the standard finance model does not explain well how most people undertake financial decision-making. It attempts to explain market anomalies and other market activity that is not explained by the traditional finance models such as MPT and the EMH, and offers alternative explanations for the key question of why security prices deviate from their fundamental values.

Some of the key concepts of behavioural finance are noted below.

1.6.1 Decision Making

Behavioural finance suggests that very often our decision-making process is not a strictly rational one where all relevant information is collected and objectively evaluated. Rather, we will often take mental shortcuts or use our intuition and gut feelings in the process.

Heuristics and Bounded Rationality

Heuristics refers to the 'rules of thumb', educated guesses or 'gut feelings' which humans use to make decisions in complex, uncertain environments.

Limited time and cognitive capacity mean people have problems inferring relevant facts when making decisions, even when they may have all the relevant information. Behavioural finance refers to this as 'bounded rationality'.

As an example, we will often look for comparable situations to the one which we currently confront, and try to find a pattern or similarity in the circumstances to help us understand how best to deal with the current situation. Sometimes this is expressed as an appeal to common sense, although this notion is far from as clear as one would like it to be.

Some key decision attributes have been identified including:

- Individual preferences tend to be multidimensional, open to change, and often formed only during the decision process itself.
- Individuals appear to be adaptive. The nature of the decision and the environment in which the decision is made contribute to the selection of a decision process or technique.
- Individuals seek satisfactory, rather than optimal, solutions.

Some results of research into decision-making from behavioural finance are detailed below.

Key Concepts	
Use of Information	• Individuals may not take into account all relevant information. • This might help explain why investors rely on past performance and fail to take full account of risk and expected return
Investment Inertia	• Several studies show that once people have made asset allocation decisions, they tend to leave them unchanged. The status quo then becomes people's default position. • Status quo bias is the tendency for people to stick with their prior choices, especially in circumstances of too much • complexity.
Representativeness	• When faced with having to make decisions under conditions of uncertainty and inadequate information, an individual will tend to see patterns and similarities to previous contexts where perhaps none exists.
Overconfidence	• Overconfidence leads many investors to overestimate their predictive ability. • People can be slow to revise their previous assessment of a company's likely future performance, even when there is notable evidence that their existing assessment is incorrect.

Key Concepts	
Herding	• Occurs when investors will tend to follow each other, somewhat irrationally, and be led by an ebullient and upward-trending market into speculative 'bubbles'.
Anchoring	• People tend to base their decisions on reference points that are often arbitrarily chosen. • People are concerned not only with what they have, but with how it compares to what they used to have and with what they might have had. • For example, whether people choose to sell shares is influenced by what they paid for them.
Gambler's Fallacy	• This is the belief that there are discernible sequences or patterns observable in repeated independent trials of some random process, such as the repeated spinning of a roulette wheel.
Availability	• This is the notion that if something readily comes to mind when asked to consider a question or make a judgment, then that must be relevant and important. • This means that investors tend to overweight more memorable facts and evidence.

Research finds that individuals tend to rely more heavily on heuristics as decisions become more complex, or when time is short, or emotions run high. People also tend to reduce the portion of information considered when they are under stress.

1.6.2 Prospect Theory

Traditional financial theory suggests that we aim to maximise our investment decisions by making an overall evaluation of whether an investment choice is desirable. According to prospect theory, however, people value gains and losses differently and so will base decisions on perceived gains rather than perceived losses. So, if a person were given two equal choices, one expressed in terms of possible gains and the other in possible losses, they would choose the former – even when they achieve the same economic end result.

In their paper Prospect Theory[1], American psychologists Daniel Kahneman and Amos Tversky argue that the price that investors pay for a stock has a critical effect on their subsequent behaviour (the so-called disposition effect). Investors also tend to have a greater emotional response to losses than similarly-sized gains. From their research, Kahneman and Tversky suggest that when investors experience a $1 loss, this is 2.25 times more painful than a $1 gain. Therefore, investors often sell their winners quickly in order to lock in gains, which limits how fast stock prices adjust to positive news. The converse is true for bad news, as investors are loath to crystallise losses. This means that intrinsic value is not hit as fast as the EMH would posit, creating a momentum effect in the process.

1 Kahneman, D. and Tversky, A., 2013. Prospect theory: An analysis of decision under risk. In the Handbook of the fundamentals of financial decision making: Part I (pp. 99-127). https://doi.org/10.1142/9789814417358_0006

Some of the key concepts addressed by prospect theory are:

- **Loss aversion** – research in behavioural finance finds that investors are inconsistent in their attitude to risk. Individuals play safe when protecting gains but are reluctant to realise losses.
- **Regret aversion** – this arises from the desire to avoid feeling the pain of regret resulting from a poor investment decision. Regret aversion can encourage investors to hold poorly performing shares, since avoiding their sale also avoids having to acknowledge the fact that a poor investment decision has been made. The wish to avoid regret can also bias new investment decisions, as people will often be less willing to invest new sums in investments or markets that have performed poorly in the recent past.
- **Mental accounting** – behavioural finance has challenged the standard economic assumption that individuals treat types of income and wealth equally. It could mean for example, that individuals prefer to invest their own pension contribution as safely as possible, while there may be more appetite to seek higher returns with their employer contributions or government tax breaks.
- **Information and noise traders** – according to portfolio theory, the correct procedure to adopt for success as an investor is to become an 'information trader', as being in possession of high-quality information is the key to a profitable investment strategy. Since 'noise' is the opposite of information, people who trade on noise make trading decisions without the use of fundamental data, relying instead on trends, sentiment, anomalies and momentum. Since noise traders, by definition, do not trade on fundamentals, they are allegedly more likely to buy high and sell low.

2. Investment Strategies

2.1 Equity Strategies

Learning Objective

6.3.1 Understand the main equity strategies: active/passive/core-satellite investment; top-down/bottom-up investment styles

Appreciating the need to diversify and having regard to a client's objectives, it is unlikely that a single investment fund or one security will meet the client's requirements. Therefore, portfolio managers need to decide how to approach the task of selecting suitable investments for inclusion in the client's portfolio.

The investment strategy adopted will need first to determine whether the objectives are to be achieved using passive or active investment management.

2.1.1 Passive Investment Management

Passive management will be seen in those mutual funds that are described as index-tracker funds. Index tracking, or indexation, necessitates the construction of a portfolio to track, or mimic, the performance of a recognised underlying index.

Indexation is undertaken on the assumption that securities markets are efficiently priced and cannot therefore be consistently outperformed. Consequently, no attempt is made to forecast future events or outperform the broader market.

Indexation techniques originated in the US in the 1970s, but have since become popular worldwide. Indexed portfolios are typically based upon a **market capitalisation**-weighted index and physical replication methods employ one of the three established tracking methods:

1. **Full replication** – this method requires each constituent of the index being tracked to be held in accordance with its index weighting. Although full replication is accurate, it is also the most expensive of the three methods so is only really suitable for large portfolios.
2. **Stratified sampling** – this requires a representative sample of securities from each sector of the index to be held. Although less expensive, the lack of statistical analysis renders this method subjective and potentially encourages biases towards those stocks with the best-perceived prospects.
3. **Optimisation** – this is a lower-cost, though statistically more complex, way of tracking an index than fully replicating it. Optimisation uses a sophisticated computer-modelling technique to find a representative sample of those securities that mimic the broad characteristics of the index tracked.

The alternative is to use synthetic replication. This involves the ETF providers entering into a swap agreement with single or multiple counterparties. Synthetic replication generally reduces costs and tracking error, but increases counterparty risk. For markets not easily accessible, swap structures do have an advantage over physical replication.

The main advantage of physical replication is its simplicity. However, this comes at a cost, which brings about greater tracking error and higher charges – see chapter 4, section 1.2.1. The main advantage of synthetic replication tends to be lower tracking error and lower costs, but with the downside of counterparty risk.

The advantages of employing indexation are that:

- relatively few active portfolio managers consistently outperform benchmark equity indices, and
- once set up, passive portfolios are generally less expensive to run than active portfolios, given a lower ratio of staff to funds managed and lower portfolio turnover.

The disadvantages of adopting indexation, however, include the following:

- Performance is affected by the need to manage cash flows, rebalance the portfolio to replicate changes in index-constituent weightings and to adjust the portfolio for index promotions and demotions.
- Most indices assume that dividends from constituent equities are reinvested on the **ex-dividend (xd)** date, whereas a passive fund can only invest dividends when received, usually six weeks after the share has been declared ex-dividend.
- Indexed portfolios cannot meet all investor objectives.
- Indexed portfolios follow the index down in bear markets.

2.1.2 Active Investment Management

In contrast to passive equity management, active equity management seeks to outperform a predetermined benchmark over a specified time period by employing fundamental and technical analysis (see chapter 6, section 5) to assist in the forecasting of future events and the timing of purchases and sales of securities.

Actively-managed portfolios can be constructed on either a top-down or a bottom-up basis.

Top-Down Active Management

Top-down active investment management involves three stages:

1. **Asset Allocation**

   Asset allocation is the result of top-down portfolio managers considering the big picture first by assessing the prospects for each of the main asset classes within each of the world's major investment regions against the backdrop of the world economic, political and social environment. Within larger portfolio management organisations, this is usually determined on a monthly basis by an asset allocation committee. The committee draws upon forecasts of risk and return for each asset class and correlations between these returns.

   It is at this stage of the top-down process that quantitative models are often used, in conjunction with more conventional fundamental analysis, to assist in determining which geographical areas and asset classes are most likely to produce the most attractive risk-adjusted returns taking full account of the client's mandate.

   Most asset allocation decisions, whether for institutional or retail portfolios, are made with reference to the peer group median asset allocation. This is known as 'asset allocation by consensus' and is undertaken to minimise the risk of underperforming the peer group. When deciding if, and to what extent, markets and asset classes should be over- or underweighted, most portfolio managers set tracking error (or standard deviation of return) parameters against peer group median asset allocations.

   Finally, the decision whether to hedge market and/or currency risks must be taken.

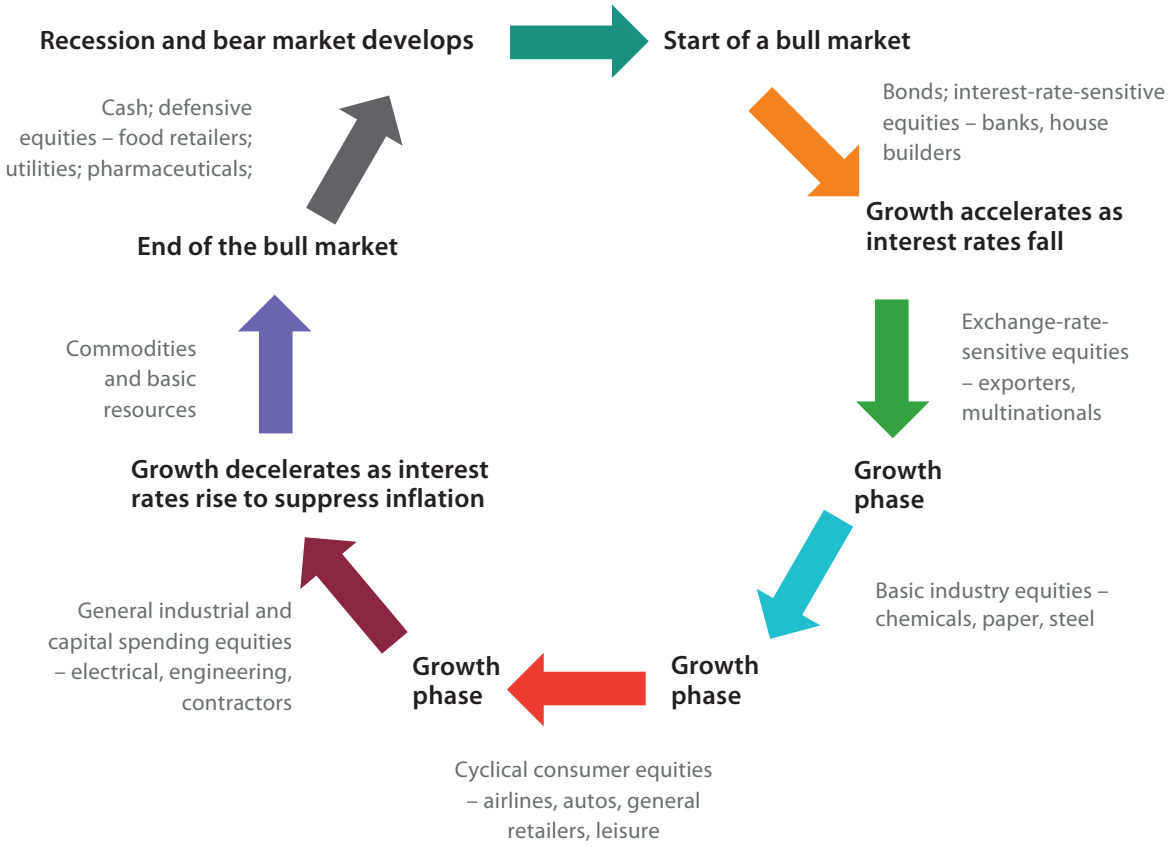
   In 2000, renowned finance experts Roger Ibbotson and Paul Kaplan[2] concluded that asset allocation accounts for over 90% of the variability of a typical fund's returns over the long term. While their findings are widely cited, others argue that it is a myth on the basis that market conditions and manager skill also significantly influence returns. In reality, the answer is not as straightforward as Ibbotson and Kaplan's study suggests. This is an area that continues to spark debate and is prompting ongoing research.

2. **Sector Selection**

   Once asset allocation has been decided upon, top-down managers then consider the prospects for sectors within their favoured equity markets. Sector selection decisions in equity markets are usually made with reference to the weighting each sector assumes within the index against which the performance in that market is to be assessed. Given the strong interrelationship between economics and investment, however, the sector selection process is also heavily influenced by economic factors, notably where in the economic cycle, the economy is currently positioned.

2 Ibbotson, R.G. and Kaplan, P.D., 2000. Does Asset Allocation Policy Explain 40, 90, or 100 Percent of Performance? Authors' Response. Financial Analysts Journal, 56(3), pp.16-19. https://doi.org/10.2469/faj.v56.n3.2356

The investment clock below describes the interrelationship between the economic cycle and various sectors (note that this is not absolute but tentative, and it does not always follow this pattern):



However, the clock assumes that the manager knows exactly where in the economic cycle the economy is positioned, and the extent to which each market sector is operationally geared to the cycle.

Moreover, the investment clock does not provide any latitude for unanticipated events that may, through a change in the risk appetite of investors, spark a sudden flight from equities to government bond markets (for example), or change the course that the economic cycle takes. Finally, each economic cycle is different, and investors' behaviour may not be the same as that demonstrated in previous cycles.

3. Stock Selection

The final stage of the top-down process is deciding upon which stocks should be selected within the favoured sectors. A combination of fundamental and technical analysis (see chapter 6, section 5) will typically be used in arriving at the final decision.

In order to outperform a predetermined benchmark, usually a market index, the active portfolio manager must be prepared to assume an element of tracking error, more commonly known as **active risk**, relative to the benchmark index to be outperformed. Active risk arises from holding securities in the actively managed portfolio in differing proportions from that in which they are weighted within the benchmark index. The higher the level of active risk, the greater the chance of outperformance, though the probability of underperformance is also increased.

It should be noted that top-down active management, as its name suggests, is an ongoing and dynamic process. As economic, political and social factors change, so do asset allocation, sector and stock selection.

Bottom-Up Active Management

A bottom-up approach to active management describes one that focuses solely on the unique attractions of individual stocks. Managers applying the bottom-up method of portfolio construction generally pay no attention to index benchmarks, except occasionally for performance comparison purposes.

Although the health and prospects for the world economy and markets in general are taken into account, these are secondary to factors such as, for example, whether a particular company is a possible takeover target or is about to launch an innovative product. In other words, stocks are selected purely on the basis of their own criteria.

Bottom-up methods are usually dependent on the style or approach of the individual fund manager or team of managers. 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 styles adopted by active managers are covered in section 2.1.3, below.

In practice, successful active managers usually develop their own personal styles over a period of years, usually based on one or other of these styles. As a result, they may end up with significant allocations to countries or sectors within their portfolios.

A true bottom-up investment fund is characterised by significant tracking error as a result of assuming considerable active risk. In practice, management group 'house rules' normally restrict the extent to which capital may be concentrated in this way. However, such portfolios can be much more volatile than those constructed using top-down methods.

2.1.3 Investment Styles

Active portfolio management, whether top-down or bottom-up, employs one of a number of distinctive investment styles when attempting to outperform a predetermined benchmark. Some of the main types are considered below.

Value Investing

Value investing is the oldest investment style. It is based on the premise that deep and rigorous analysis can identify businesses whose intrinsic value (or net worth) is greater than the price placed on them by the market, so they look set for recovery. These businesses are typically well-established companies, hence they often have high dividend yields; and they are usually cyclical in nature. It follows that managers of 'equity income' or 'income and growth' funds often adopt this style.

By buying and holding such underpriced shares, often for long periods, a higher return can be achieved than the market average, due to a 'reversion to mean' (a belief that individual securities eventually revert to a fundamental or intrinsic value).

True value stocks also offer the investor a considerable safety margin against the share price falling further, because of their characteristically high dividend yield and relatively stable earnings.

Growth Investing

Growth investing is a relatively aggressive investment style.

True growth stocks are those that are able to differentiate their product or service from their industry peers so as to command a competitive advantage. This results in an ability to produce high- quality and above-average earnings growth, as these earnings can be insulated from the business cycle. A growth stock can also be one that has yet to gain market prominence, but has the potential to do so – growth managers are always on the lookout for the next Apple or Tesla.

The key to growth investing is to rigorously forecast future earnings growth and to avoid those companies susceptible to issuing profits warnings. A growth stock trading on a high P/E ratio will be savagely marked down by the market, if it fails to meet earnings expectations.

Growth at a Reasonable Price (GARP)

GARP seeks to combine tenets of both growth and value investing. Thus, it is a less aggressive growth investment style where attention is centred on those companies which are perceived to offer above-average earnings growth potential that has yet to be fully factored into the share price.

GARP is based on finding companies with long-term sustainable advantages, 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. The style is used mainly by active growth managers.

Momentum

At its most aggressive, growth investing simply focuses on those companies whose share price has been on a rising trend and continues to gather momentum as an ever-increasing number of investors jump on the bandwagon. This is referred to as momentum investing.

Momentum investors believe that large increases in the price of a security will be followed by additional gains and vice versa for declining values.

Contrarianism

The concept behind contrarian investing is 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.

Income Investing

Income investing aims to identify companies that provide a steady stream of income. Income investing may focus on mature companies that have reached a certain size and are no longer able to sustain high levels of growth. Instead of retaining earnings to invest for future growth, mature firms tend to pay out retained earnings as dividends as a way to provide a return to their shareholders. High dividend levels are prominent in certain industries such as utility companies.

The driving principle behind this strategy is to identify good companies with sustainable high dividend yields to receive a steady and predictable stream of income over the long term.

Because high yields are only worth something if they are sustainable, income investors should also analyse the fundamentals of a company to ensure that the business model of the company can sustain a rising dividend policy.

Quantitative Analysis (Quant)

Quantitative analysis involves using mathematical models to price and manage complex derivatives products, and statistical models to determine which shares are relatively expensive and which are relatively cheap. Quantitative analysis aims to find market inefficiencies and exploit this using computer technology to swiftly execute trades. Exploiting mispricing may involve only tiny differences, so leverage is often used to increase returns.

Quant-based investors use specialised systems platforms to develop financial models using stochastic calculus. Quantitative models follow a precise set of rules to determine when to trade to take advantage of any mispricing opportunities. Speed of execution of each trade is also very important to investors using electronic platforms and quant-based systems.

Quant-based funds account for a significant proportion of hedge funds, and the growth of more sophisticated investment strategies has fuelled the adoption of quantitative investment analysis. The growth of quant funds has, however, meant that the models used by many funds are directing funds into the same positions.

Absolute Return

An absolute return strategy, which started as one of the original hedge fund strategies, seeks to make positive returns in all market conditions by employing a wide range of techniques, including short selling, futures, options and other derivatives, arbitrage, leverage and unconventional assets.

Alfred Winslow Jones is credited with forming the first absolute return fund in New York in 1949. In recent years, the use of an absolute return approach has grown dramatically with the growth of hedge funds and more recently with the launch of authorised absolute return funds that are available to retail investors. These funds aim to achieve absolute returns over a stated time horizon which will vary from fund to fund, although a typical time horizon is a rolling 12-month period.

Note that while absolute return funds the potential to outperform during market downturns, they are unlikely to keep pace with traditional equity funds during a market rally, as their short and hedging positions could act as a drag on performance.

Centralised versus Decentralised Investment

Many managers develop their own investment style. When evaluating the style that is being followed, it is also important to understand whether the manager is operating within the restrictions imposed by a 'house style' or is free to follow their own convictions.

This is described as either a centralised or decentralised approach:

- **Centralised approach** – a firm decides that it will have an agreed investment policy that all of its managers will follow.
- **Decentralised approach** – a firm will give discretion to its managers to operate freely or within general constraints.

The approach adopted can often be important in the analysis of a fund. Large fund groups often have an organisational infrastructure that can support extensive research and are likely to have several people involved in the management of a fund, so that the departure of one individual will not necessarily have a great impact on performance.

By contrast, a smaller fund can allow a talented fund manager to demonstrate their skills and deliver exceptional returns without the bureaucracy and constraints that might exist in a larger organisation. Many boutique fund management operations have been set up to exploit this very edge. However, these types of funds can present a risk through their dependence on one key individual. The potential for superior investment returns needs to be balanced against the absence of organisational support and the potential impact that can have on the consistency of returns.

2.1.4 Combining Active and Passive Management

Having considered both active and passive management, it should be noted that active and passive investment strategies are not mutually exclusive.

Index trackers and actively managed funds can be combined in what is known as core-satellite management. This is achieved by indexing, say, 70% to 80% of the portfolio's value so as to minimise the risk of underperformance ('core'); and then fine-tuning this by investing the remainder in a number of specialist actively managed funds or individual securities ('satellites').

The core can also be run on an enhanced index basis, whereby specialist investment management techniques are employed to add value. These techniques include stock lending and anticipating the entry and exit of constituents from the index being tracked.

In addition, indexation and active management can be combined within index tilts. Rather than hold each index constituent in strict accordance with its index weighting, each is marginally overweighted or underweighted relative to the index based on perceived prospects.

2.1.5 Smart Beta

Traditional active and passive funds help investors achieve their investment goals, but a newer alternative aims to combine the benefits of both approaches into one product. It goes by many names, eg, smart beta, strategic beta, fundamental indexing and factor investing, among many others.

The key difference between a smart beta fund and a traditional index fund is that a smart beta fund does not track a market capitalisation weighted index such as the S&P 500, but instead tracks an index based on fundamental characteristics which can range from macroeconomic factors such as economic growth to investment style factors. Examples of the different factors are shown in the table that follows.

Macroeconomic Factors	Macroeconomic factors capture broad risks that exist across asset classes and include the following: • economic growth • real interest rates • inflation • credit • emerging markets, and • liquidity.
Style Factors	Style factors capture risks and returns within asset classes and include the following: • minimum volatility • momentum • value • quality, and • size.

Individual factors are typically driven by different market phenomena and, therefore, tend to be rewarded in different market environments and economic cycles. Smart beta will typically target more than one factor in order to provide opportunities to seek improved returns, reduced risk or enhanced diversification.

By systematically tilting investment exposures toward factors within an index framework, smart beta strategies combine characteristics of both passive and active investing. They are active in that they can potentially enhance returns and reduce risk through exposures to proven drivers of return. At the same time, they resemble traditional passive strategies in that their implementation is transparent, systematic and rules based.

Investors considering these types of funds need to understand the index construction that underpins a fund as similar sounding funds may produce different results.

2.1.6 Smart Alpha

Smart alpha aims to benefit from an investor's best investment ideas, independently of markets movements. The way in which smart alpha works is very similar to smart beta, in that an investor creates a custom benchmark (active) that tracks their best investment ideas (passive). A key difference, though, is that the index's exposure to the wider market (ie, beta) is hedged out, thus enabling the strategy to capture pure alpha.

A smart alpha strategy is therefore 'market-neutral'; in other words, it does not move with the broader market, but instead follows the performance of the investor's individual ideas.

2.2 Ethical, Responsible and Sustainable Investing

Learning Objective

6.3.2 Understand the potential importance of ESG considerations

In today's world, many individuals are concerned about the environment, business practices and ethical issues. As a result, many want to reflect their personal values in the investments they make whether that is supporting environmentally conscious companies, avoiding the likes of tobacco and oil shares or using their funds for impact investing that generate social and environmental impact alongside a financial return. Other investors may be opposed to investing in specific areas of the market on religious grounds, or they may be forced to avoid certain sectors, industries or stocks due to restrictions placed on them (eg, in a trust deed).

The terms 'ethical investing' and 'ESG investing', among many others, are sometimes used interchangeably by investors and wealth professionals alike. In practice, each are strategies in their own right, so it is important to understand their differences (see section 2.2.2).

While ethical, responsible and sustainable concerns have been of great importance to many for decades (if not centuries), awareness of environmental and ethical issues has heightened in recent years. An increasing number of investors are particularly keen to put their money into companies that make a positive contribution to the environment and society, while also avoiding those that engage in unethical practices or that have negative social and environmental practices. In this section, we will look at the closely linked subject of corporate governance before considering the various approaches that can be taken to ethical, responsible and sustainable investing.

2.2.1 Corporate Governance

Corporate governance should be seen in terms of the rules that direct and control the company's activities. When looking at the subject of corporate governance, an essential starting point to remember is that a company is a separate legal entity, distinct from its shareholder owners. Moreover, the day-to-day running of a company is the responsibility of the company's executive directors. Corporate governance can also include how it treats its shareholders, stakeholders, employees and customers and its impact on society and the environment.

The executive directors and other members of the board are ultimately accountable to the company's shareholders for their actions in carrying out their stewardship function. Therefore, a mechanism is needed to ensure that companies are run in the best long-term interests of their shareholders. This mechanism is known as corporate governance. The mechanisms by which stakeholders exercise their rights to ensure effective corporate governance vary from country to country, but include a series of laws, legal duties, regulations and codes, all of which are designed to define the roles and responsibilities of directors, provide oversight of their activities and then ensure that there is appropriate disclosure of the activities undertaken to shareholders and other stakeholders. The types of mechanisms available can be looked at under two headings:

- mechanisms that are in place internally within a company, and
- external assessment of the effectiveness of those controls.

Corporate Governance Mechanisms	
Internal examples include: • an independent board of directors which monitors the activities of the executive officers of the company in the exercise of their duties • separation of responsibilities between the chairman and chief executive • appointment of independent non-executive directors, and • the establishment of specialist committees, such as audit and risk committees, to undertake independent assessment and oversight of risks and • financial reporting.	External examples include: • legal duties imposed on directors • listing rules of stock exchanges that have to be adhered to • reporting of financial performance, and • independent audit of financial, and other, statements.

The importance of good corporate governance is recognised internationally and led to the development of the Organisation for Economic Co-operation and Development (OECD) Principles of Corporate Governance. These Principles have become an international benchmark; and the Financial Stability Board (FSB), under its former name of the Financial Stability Forum, has designated the Principles as one of the 12 key standards for sound financial systems. The Principles are designed to support the development of a robust legal and regulatory framework, and to provide guidance and suggestions for stock exchanges, investors, corporations, and other parties that have a role in the process of developing good corporate governance.

1. Ensuring the basis for an effective corporate governance framework.
2. The rights of shareholders and key ownership functions.
3. The equitable treatment of shareholders.
4. The role of stakeholders.
5. Disclosure and transparency.
6. The responsibilities of the board.

Corporate governance is concerned with the creation of shareholder value through the transparent disclosure of a company's activities to its shareholders, director accountability and two-way communication between the board and the company's shareholders.

Effective governance of a company is of great interest to its shareholders, as how well companies are run affects market confidence as well as company performance. If companies are well run, they will generally prosper which, in turn, will enable them to attract investors whose support can help to finance faster growth. On the other hand, poor corporate governance can result in the regulator or another body investigating the company which, if nothing else, would be negative for the brand; it could also weaken a company's potential and, at worst, pave the way for financial difficulties and even fraud.

2.2.2 Ethical, Responsible and Sustainable Frameworks

Global disclosure frameworks offer standardised guidelines and reporting mechanisms that enable firms to transparently communicate their ethical, sustainable and responsible performance. This helps investors, stakeholders and the public at large to make informed decisions about a company's commitment to social and environmental responsibilities, and alignment with global sustainability goals. Some examples of disclosure frameworks include the following:

- **Global Reporting Initiative (GRI) Standards** – are reporting guidelines that cover a range of topics including biodiversity, waste, emissions and tax. Unlike earlier reporting frameworks, the GRI standards have a modular structure, so are easier to update and adapt.
- **Sustainability Accounting Standards Board (SASB) Standards** – are industry-specific standards, on the basis that responsibility and sustainability issues that are most likely to impact financial performance will vary from one industry to another. For example, in terms of the environment, greenhouse gas emissions are a key issue in the oil and gas industry, water management in agriculture, and energy consumption in industrials; similar applies to societal and governance issues.
- **International Sustainability Standards Board (ISSB) Standards** – are global sustainability related financial reporting standards. The ISSB's first two standards – IFRS S1 and S2 – are effective for reporting periods beginning on or after 1 January 2024. IFRS S1 applies globally to corporates in all sectors. IFRS S2 is more detailed with regard to specific topics, particularly climate mitigation and adaptation.
- **Task Force on Climate-related Financial Disclosures (TCFD)** – had 11 disclosure recommendations, which spanned four core elements: governance, strategy, risk management, and metrics and targets. While voluntary, some countries and regions have incorporated TCFD-aligned requirements into law or require full compliance with disclosure law related to TCFD guidelines. Concurrent with the release of its 2023 status report, the TCFD has fulfilled its remit and disbanded; and the IFRS Foundation has taken over monitoring of companies' progress relating to their climate-related disclosures.

2.2.3 Ethical, Responsible and Sustainable Approaches

Having identified the types of concerns motivating ethical, responsible and sustainable, investors want their money to be put to good use. This means not just achieving a market return, but also benefiting society (or, at least, not doing harm) – a sentiment known as 'doing well while doing good'.

Two common approaches to screening are:

- **Negative screening** – deliberately excludes companies involved in 'undesirable' activities (eg, the 'sin stocks'), although the list has extended over the years to include deforestation, the fur trade, and the charging of excessive interest rates (typically associated with payday loans), among others. Overall, a negative screening process tends to explicitly avoid more companies than a positive screening process (see below).
  One challenge that can arise is determining whether a company should be excluded if part (but not all) of its operations is involved in a particular activity. To address this, de minimis levels (ie, the level of exposure to the excluded activity deemed acceptable) may be applied to the firm's turnover or revenue: the lower the level, the stronger the exclusion.
- **Positive screening** – grew out of negative screening. It seeks to support firms providing positive solutions to challenges such as climate change and social justice. While this would exclude companies involved in activities deemed to be unacceptable, there is room for investment in what some investors may consider to be 'less-than-perfect' businesses (eg, a clothing company that sells fur), as long as they are making efforts to improve their practices (eg, preserving the environment).

To complicate matters further, some funds focus less on investing in the best environmental and/or social operators in their field, and more on engaging with the companies in which they invest (perhaps with relatively poor track records). Shareholders – as partial owners of a business – may enter into dialogue with management, to encourage behavioural change and address serious ESG issues, as an alternative to voting. For example, entering into discussions with an environmentally damaging oil producer, about its carbon emissions, is more meaningful and relevant than employee satisfaction. It is important to remember that change takes time and commitment. The setting of short-term objectives and milestones, and regularly monitoring progress towards them, can help organisations to achieve their longer-term targets. Having said that, shareholder engagement into perpetuity can be viewed as a form of greenwashing. Thus, for engagement to be effective, investors may need to be prepared to disinvest if organisations refuse to respond appropriately.

While negative screening, positive screening and shareholder engagement can be effective strategies in isolation, they can also be combined to create various investment strategies. From this, it is important to recognise that investment funds can focus on different issues, and fund managers take different views on ethical, responsible and sustainable issues: some cover a wide range of issues; others on a small number. Many cluster issues together into themes such as 'sustainability' or 'the environment', as these are areas of increasing importance and interest to both individuals and investors; while others concentrate on social matters.

Regardless, the terms 'ethical investing', 'ESG', 'sustainable and responsible investing' and 'impact investing' (to name a few) are sometimes used interchangeably by financial professionals and investors alike. In practice, each is a strategy in their own right, and there are distinct differences between them.

Environmental, Social & Governance (ESG)

ESG involves three key dimensions of responsible and sustainable investing:

- **Environmental** – this includes concerns about carbon dioxide (CO2) emissions, pollution, the degradation of forests and woodland, overfishing and intensive agricultural methods, among others.
- **Social justice** – this relates to human rights (eg, the use of modern slavery) and working conditions (eg, paying below the living wage), as well as corporate structures.

- **(Corporate) governance** – companies with weak internal controls may have management that is not following company policies, which increases the risk of irresponsible behaviours and corruption.

Socially Responsible Investing (SRI)

SRI is broadly similar to ESG, except that SRI is driven first by investors' individual values rather than investment potential. Today, one of the most important issues for SRI (among other forms of responsible, sustainable and ethical investment) is shareholder engagement, whereby shareholders (as partial owners of a business) may enter into dialogue with management to encourage behavioural change and address serious ESG issues, as an alternative to the formal vote on a shareholder resolution.

Impact Investing

This refers to investment into companies to generate a positive environmental or social impact, alongside a financial return. That is not to say that impact investors will not expect a decent financial return, but they are prepared to consider the positive or beneficial impact of their investment as part of their overall 'return' (ie, they consider both financial and non-financial benefits).

Responsible and Sustainable Investing

'Responsible and sustainable investing' is an umbrella term representing three key investment strategies: ESG, SRI and impact investing.

By incorporating these factors into their investment decisions, responsible investors hope to better manage risk and generate sustainable, long-term returns. In comparison, sustainable investors focus on progressive practices, and recognise that companies solving the world's biggest challenges can be best positioned to grow over the long term.

Ethical Investing

Ethical investing is the practice of selecting investments based on ethical or moral principles. This involves filtering out unethical companies involved in the 'sin stocks' (ie, alcohol, tobacco, gambling, adult entertainment and weapons manufacture). At the same time, it may involve supporting ethical companies, that are making a positive contribution through their products and services.

Philanthropy

This is a form of investing that lies at an extreme beyond impact investing, as philanthropists expect to see no financial or monetary return from their 'investment' or donation (or, should they decide to give away their wealth, to even receive back their initial stake). It is important for advisers to understand donors' key motivations for supporting their chosen causes, and match donations with those causes to maximise the impact of donations.

Other Approaches

Other investment approaches are as follows:

- **Best-in-class** – Identifying the best environmental and social operators within a sector, or industries within the global economy. Alternatively, selecting the 'least bad' companies within a sector, or those actively improving their ESG scores. This can motivate companies to 'do better'.

- **Thematic investing** – Identifying long-term global themes and trends that are transforming the world and, in turn, investing in companies (regardless of location) offering solutions to these issues (note: depending on the theme, this type can be used outside of ESG investment).
- **Green finance** – Investing in companies that derive most (if not all) of their revenues and profits from business practices that are beneficial to the environment. Typically, green finance refers to investments in projects and activities with clear and quantifiable environmental benefits, and that align with established environmental criteria, such as those defined by the EU Taxonomy Regulation. Often treated synonymously with ESG and SRI, although there are differences in their scope (particularly relating to social and governance issues).
- **Climate finance** – Projects that help reduce emissions (eg, renewable energy), as well as those that mitigate the susceptibility, and maintain and increase the resilience, of human and ecological systems to its adverse impacts (eg, sustainable infrastructure). While climate finance is available to all countries, it has a strong focus on supporting projects in developing countries. This is based on the recognition that developing countries contribute less to global greenhouse gas emissions than developed nations, yet they are more vulnerable to the impacts of climate change.
- **Blue finance** – Providing finance for projects aimed at sustainable ocean and marine resources management (eg, plastic pollution prevention, sustainable fisheries). In September 2023, the International Capital Market Association (ICMA) released voluntary blue bond guidance to provide guidance on the key components involved in launching a credit blue bond.
- **Portfolio tilting** – Moving the portfolio away from heavier carbon-using industries/companies, towards low-carbon industries. Overall, the portfolio has a low carbon intensity, while permitting an allocation to a wide range of sectors and/or companies to aid diversification and performance.
- **Fossil divestment** – Cutting ties with, selling out of, or refusing to own stock (equities or bonds) in companies that extract or produce coal, oil or gas.
- **Divest-invest** – Divestment from fossil fuel firms is balanced by investment in renewable energy companies, to use financial markets to help promote the transition to a lower-carbon economy.

2.2.4 Investment Performance

Performance Implications

Generally, investors should remember that the more restrictions they place on a portfolio, the more likely they are to limit its potential for good short-term performance. This is simply because the investment universe is smaller, so there are fewer options to select from, resulting in a less-diversified portfolio.

That said, debates revolve around whether incorporating responsible and sustainable investment factors into the investment process will help or hinder overall returns. Those in favour of responsible and sustainable approaches sometimes argue that performance from individual investments selected on these grounds tend, over the long term, to be better than that of some other companies; this is, in part, because they tend to have strong internal governance criteria, which feeds through into better overall management controls. However, critics argue that the additional restrictions placed on a company complying with responsible and sustainable criteria can only limit its abilities to make decisions in the (financial) best interests of its shareholders, so performance must be lower.

Over the longer term, businesses identifying and harnessing responsible and sustainable issues can improve their economic impact, so long as those issues are relevant to the business. This is because companies addressing such issues are able to identify and manage risks effectively, and keeping ahead

of evolving regulation and compliance requirements means that they can prevent costly legal action and reputational damage associated with non-compliance. Additionally, embracing responsible and sustainable issues can lead to innovation and operational efficiency (eg, cost savings through reduced resource consumption), help to attract and retain top talent (in turn boosting productivity), and supply chain resilience.

Ethical, Responsible and Sustainable Investment Indices

In addition to increasing awareness of responsibility and sustainability issues among asset managers, businesses, investors and consumers, regulators around the world are pushing for consistent metrics and additional insights into how companies are incorporating responsibility and sustainability risks into their business plans.

The universe of companies publicly demonstrating their commitment to managing their operations in a responsible and sustainable way continues to expand, such that responsible and sustainable investment indices have broadly keeping pace with the broader market over the long term.

There are several organisations providing information on responsible and sustainable funds and their performances. Some indices only include companies which meet specific criteria, while others may exclude certain companies or perhaps adopt a 'best-in-class' approach. The list below is by no means an exhaustive one, but it gives an indication of the indices available. You may wish to look at the performance of these indices yourself to see how they compare with the wider market, and consider whether current trends (eg, the publicity given to climate change) may be benefiting companies investing responsibly and, as a consequence, such indices:

- **FTSE4Good Index Series** – measures the performance of companies that meet globally recognised corporate responsibility standards. It also recently began to consider factors relating to how much a company contributes to climate change. For example, the FTSE4Good UK Index is similar to the FTSE All-Share, which lists shares according to market capitalisation, but with various exclusions.
- **MSCI KLD 400 Social Index** – a socially screened version of the S&P 500 index. It comprises 400 companies, drawn from the 3,000 largest US public equities, as measured by float-adjusted market capitalisation, that meet certain environmental and social standards. It is the US equivalent of FTSE4Good.
- **Dow Jones Sustainability Indices** – a series of indices that track the financial performance of the world's leading companies in terms of ESG criteria. They are the longest-running sustainability benchmarks worldwide, and today are used for a wide range of ESG benchmarking and investment applications.
- **Calvert US Large-Cap Core Responsible Index** – is a market-capitalisation-weighted benchmark of large companies that are considered socially responsible or ethical. The index is derived from 1,000 of the largest publicly traded companies in the US, using Calvert's criteria relating to the environment, workplace issues, product safety, weapons contracting and human rights, among others.
- **Dow Jones Islamic Market World (DJIM) Index** – the first index that measures the performance of a global universe of investable equities that comply with Shariah law. It has an independent Shariah supervisory board, which advises on the methodology for screening securities for inclusion in the index and related matters relating to Shariah compliance of the eligible components.

2.3 Bond Strategies

Learning Objective

6.3.3 Understand bond strategies

As well as ensuring an appropriate level of diversification, there are a number of active and passive bond strategies that can be employed.

Active Bond Strategies

Generally speaking, active bond strategies are used by portfolio managers who believe that the bond market is not perfectly efficient and therefore subject to mispricing. They can also be employed where it is believed that the market's view on future interest rate movements (implied by the yield curve) is incorrect or has failed to be anticipated, known as **market timing**.

The following are examples of active bond strategies:

- Duration switching alters the portfolio duration with expected changes in interest rates. For example, an investor expecting a fall in interest rates may increase the duration by replacing low- with high-duration bonds.
- Riding the yield curve involves buying a long-term bond but selling it before maturity, to profit from a declining yield over the bond's life. This is a valid strategy when the yield curve is upward sloping.
- Bond switching (or swapping) exchanges one bond for another. There are three main types:
  - Anomaly switching moves between two bonds similar in all respects apart from their yields and/or prices. This pricing anomaly is exploited by switching away from the expensive to the cheap bond.
  - Policy switching switches between two dissimilar bonds to take advantage of anticipated changes in interest rates, the structure of the yield curve, bond credit ratings, and so on.
  - Intermarket spread switching moves between government and corporate bonds with different terms (eg, coupon rate, maturity date, credit rating) to obtain a more positive yield spread.

Passive Bond Strategies

Passive bond strategies are employed either when the market is believed to be efficient (in which case, a buy-and-hold strategy is used), or when a bond portfolio is constructed around meeting a future liability fixed in nominal terms.

To demonstrate how each of the following strategies works, let us assume that an investor has a liability due in 10 years' time. The options are:

- **Bullet** – a bullet portfolio invests in bonds with durations close to that of the liabilities; for example, the investors with a liability due in 10 years could construct a bullet portfolio of nine- and 11-year duration bonds in equal proportions. The portfolio would then have a duration that matched the liability: (0.5 x 9) + (0.5 x 11) = 10 years. In practical terms, one bond would be repaid earlier than needed and the other would need to be sold, although it would be very short-dated and so should realise close to its par value.

- **Barbell** – this involves investing in a series of securities of more than one maturity to limit the risk of fluctuating prices with maturities at both ends of the spectrum (ie, long and short term). The role of the longer-dated stocks is to deliver an attractive yield, while having some shorter-dated stocks that are due to mature in the near term creates the opportunity to invest the money elsewhere if the bond market takes a downturn.
  Let us assume we can identify two bonds, one with a four-year duration and the other with a 15-year duration. By changing the proportions invested in each, we can construct a portfolio that has a duration that matches the liability, by investing 45.5% in the first and the balance in the latter: (0.455 x 4) + (0.545 x 15) = 10 years. In practical terms, the portfolio could not remain static and would obviously need regular rebalancing.
- **Cash flow matching** – this simply purchases bonds whose redemption proceeds will meet a liability as they fall due.
- **Immunisation** – also called duration matching, this involves an investor buying a portfolio of bonds with a duration (not maturity) equal to any liabilities, thus insulating the portfolio from the effect of future interest rate changes. **Immunisation** is often employed by those bond portfolio managers with a known future liability to meet.
- Immunisation can be performed by using either of the following techniques:
  - **Cash matching** involves constructing a bond portfolio whose coupon and redemption payment cash flows are synchronised to match those of the liabilities to be met.
  - **Duration-based immunisation** involves constructing a bond portfolio with the same initial value as the present value of the liability it is designed to meet and the same duration as this liability.
- **Laddering** – this involves buying bonds with a range of different maturities, thus reducing sensitivity to interest rate risk. The percentages invested in each would need to be adjusted to meet the liability. As the earlier bonds are repaid, the proceeds could be withdrawn or reinvested in later maturities, and the spread of bonds maintained or concentrated as desired.
  The benefits of this strategy can be seen by looking at the alternatives of investing in short-dated securities only or long-dated only:
  - If only **short-dated securities** were selected, then the bond portfolio would have a high degree of stability, as these securities would be least affected by changes in interest rates. The price of this stability, however, would be giving up the higher yield that could be obtained from longer-dated stocks.
  - If **longer-dated stocks** only were selected, then the investor would gain the higher yield, but at a cost of greater volatility and exposure to potential losses if the stocks have to be sold before maturity, or there are interest rate rises.

  Constructing a laddered portfolio would, therefore, balance out some of these risks. The return would be higher-than if only short-dated securities were bought, and the risk would be less-than if just long-dated stocks were bought. If interest rates fell, then it would be necessary to reinvest the proceeds from the stock that matures soonest at a lower rate, but the remaining stocks would be paying an above-market return. Conversely, if rates rise, the portfolio will be paying a below-market return, but investment in higher rates can be made as soon as the next maturity takes place.

3. The Role of Asset Classes and Funds in a Portfolio

Learning Objective

6.3.4 Understand the use of different asset classes within a portfolio

6.3.5 Understand the use of funds as part of an investment strategy

It should be clear by now that in order to reduce the risk associated with investing in a single asset class, an investor should maintain a diversified investment portfolio consisting of different types of assets in varying percentages, depending upon individual circumstances and objectives. The aim is to achieve a diversified portfolio of asset classes that can enhance returns whilst diversifying the overall risk of the portfolio.

The basis for constructing a portfolio made up of different asset classes is based on modern portfolio theory (MPT; see section 1.1 of this chapter), which states that, for a different level of risk, different assets can be combined to enhance returns. Changing the weightings/amount of money invested in these asset classes allows strategies to target specific customer risk profiles.

3.1 The Role of Cash in a Portfolio

Cash deposits and money market instruments provide a low-risk way to generate an income or capital return, as appropriate, while preserving the nominal value of the amount invested, excluding the effect of inflation. They also play a valuable role in times of market uncertainty and/or to control the level of volatility in a portfolio, given that cash is a low volatility asset class. However, cash as an investment is unsuitable for anything other than the short term as, historically, it has underperformed most other asset types over the medium to long term. Moreover, in the long term, the post-tax real return from cash (ie, after taking into account the effects of inflation) has barely been positive, if not negative.

3.2 The Role of Bonds in a Portfolio

As bonds have a predictable stream of interest payments and the repayment of principal, they can have a large role to play in constructing a portfolio to meet the needs of an investor, whether that is providing a secure home for funds, generating a dependable level of income or providing funds for a known future expense or liability.

Their main advantages are:

- for most bonds, a regular and certain flow of income (which, for inflation-linked bonds and floating rate bonds, are uplifted by adjustments tied to inflation and benchmark interest rates respectively)
- for most bonds, a fixed maturity date (however, there are bonds with no redemption date, are dual-dated, or with call/put provisions – see chapter 3, section 2.1.3), and
- a range of income yields to suit different investment and tax situations.

Their main disadvantages/risks are:

- **Credit risk** –the general risk that counterparties may not honour their obligations. A subset of credit risk is default risk, which occurs when a debtor has not met its legal obligations, which can be either that it has not made a scheduled payment or has violated a loan covenant.
- **Market risk** – also called price risk, this is the risk that movement in interest rates can have a significant impact on the value of bond holdings (considering the inverse relationship between prices and interest rates)
- **Inflation risk** – the risk of inflation rising unexpectedly, and its effect on the real value of the bond's coupon payments and redemption payment (except in the case of inflation-linked bonds and, to a certain extent, floating rate notes).
- **Liquidity risk** – some bonds are not easily or regularly traded and can, therefore, be difficult to realise at short notice or can suffer wider than average dealing spreads.
- **Exchange rate risk** – bonds denominated in a currency different from that of the investor's home currency are potentially subject to adverse exchange rate movements.
- **Reinvestment risk** – the risk that an investor will be unable to reinvest cash flows received from a bond at a rate comparable to their current rate of return.
- **Rollover risk** – a risk associated with the refinancing of debt and is the risk that countries or companies face when debt is due to mature, and needs to be rolled over into new debt which, may have to be financed with higher interest rates.

There are a number of further risks attached to holding corporate bonds, notably:

- **Early redemption risk** – the risk that the issuer may invoke a call provision if the bond is callable.
- **Seniority risk** – the seniority with which corporate debt is ranked in the event of the issuer's liquidation.

Of these risks, credit risk, market risk and inflation risk are of principal concern to bond investors.

As we saw earlier, bond prices have an inverse relationship with interest rate movements and so price or market risk is of particular concern to bond holders, who are open to the effect of movement in interest rates, which can have a significant impact on the value of their holdings. Investors are also exposed to **reinvestment risk** and rollover risk.

3.2.1 Direct Bond Holdings

There is a diverse range of fixed-income securities that offer a wide variety of choices which enable investments to be tailored to an individual's financial objectives, income needs and tolerance for risk. A structured approach is needed to find bonds that match the investor's investment objectives, and which are consistent with their attitude to risk.

Diversification within the bond element of a portfolio is essential to manage the risks associated with them. Avoiding a single investment is important, and a portfolio of several bonds of different types and spread across different issuers will help reduce risk. For example:

- **Bonds from different issuers** – to protect against the danger that any one issuer will be unable to meet its obligations to pay interest and principal.

- **Bonds of different types** – having bonds issued by governments, international agencies, corporate firms and other issuers create protection against the possibility of losses in any particular market sector.
- **Bonds of different maturities and durations** – to protect against the risk of adverse interest rate movements.

The construction of a bond portfolio should also look to ensure that there is an appropriate balance between investment grade and high-yielding bonds, as well as between government and corporate issuers.

3.2.2 Bond Funds

An alternative to constructing a bond portfolio is to use a mutual fund that invests in bonds. In addition, it is easier to buy a diversified amount of bonds for a private client portfolio via a fund, than to buy individual bonds, where the minimum purchase amount could be $10,000 or $50,000 nominal. Bond funds offer investors another way to invest in the bond markets and allow an investor to diversify risks across a broad range of securities and access professional selection and management of a portfolio of securities. The advantages of bond funds include:

- **Diversification** – bond funds will normally have a range of individual bonds of varying maturities, so the impact of any one single bond's performance is lessened if that issuer should fail to pay interest or principal. Certain types of bond funds are also diversified across different bond sectors. That said, this will depend on the investment objectives and strategy of the fund.
- **Professional management** – as with other mutual funds, bond funds provide access to professional portfolio managers who are able to analyse individual bonds to determine what to buy and sell and how to achieve sector allocation and yield curve positioning.
- **Liquidity** – again, as with other mutual funds, daily trading allows bond fund holdings to be bought and sold.
- **Income** – most bond funds pay regular distributions which can be half-yearly, quarterly, or monthly, and, therefore, they can provide an investor with a regular income stream.

While a bond fund may be an effective alternative to a direct portfolio for some investors, there are certain factors that need to be borne in mind.

The investor is buying the units/shares of a fund which is being actively managed, with bonds being added to and eliminated from the portfolio in response to market conditions and investor demand. As a result, bond funds obviously do not have a specified maturity date and so are less useful where a certain sum is needed at a future date to meet an expected liability.

It should also be remembered that, although bond funds will enable an investor readily to achieve diversification, they are still exposed to credit risk, inflation risk and interest rate risk. As we have already seen, the market value of bonds fluctuates daily and so, therefore, will a bond fund's NAV, meaning that the value of the investor's holding will fluctuate and the price obtained on sale could be higher or lower depending upon how the market and the fund have performed since the shares were bought.

Also, there is a cost to achieving diversification and professional management. Most funds charge various fees including initial charges, exit charges and/or annual management charges, among others (see chapter 4, section 1.2.1), all of which will reduce returns to the investor – hence, it is important to take account of the total costs when calculating the overall expected returns.

An alternative to an actively managed bond fund is a passively managed bond tracker fund. These funds allow an investor to track the returns of a bond index, but at a fraction of the cost of their actively managed peers.

However, passively managed bond funds may face liquidity challenges. The reason for this is the bond market is an over-the-counter (OTC) market, which can lack liquidity and price transparency. As bonds are often held until maturity, there is often not an active secondary market, which makes it difficult to ensure that a passively managed bond fund encompasses enough liquid bonds to track an index.

A passively managed bond fund needs to track its respective index closely in a cost-effective manner despite this lack of liquidity. This is a bigger issue for corporate bonds than for government bonds, since corporate bonds generally have lower trading volumes and are less liquid compared to government bonds. Further, the bond universe is huge, and considerably larger than the equity market, which makes bond indices more difficult to fully replicate – this is because companies typically issue one type of share, but they can issue multiple bonds with different coupon rates, maturities and terms. Investment firms offering passively managed bond funds have overcome this problem by using representative sampling, whereby they track only a selected subset of bonds that are deemed to be representative of the broader bond index.

3.2.3 Bond Selection

There is a wide range of bond funds available to investors, so careful selection is essential. Some key factors that should be considered include:

- **Investment objectives** – although bond funds may have similar objectives, such as achieving a high income or preservation of capital, there will be differences in how they will go about achieving this. Some may limit their investments to government stocks, while others may invest in different bond sectors including government bonds, corporate bonds and asset-backed securities, or equally a bond fund.
- **Average maturity** – a fund will have a range of bonds with different maturities and will calculate a weighted average maturity. The longer the maturity, the more sensitive the fund will be to changes in interest rates.
- **Duration** – duration estimates how much a bond's price fluctuates with changes in comparable interest rates. If rates rise by 1%, for example, a fund with an equivalent five-year duration is likely to lose about 5% of its value. However, other factors will also influence a bond fund's performance and share price, so actual performance may differ.
- **Credit quality** – the average credit quality of a bond fund will depend on the credit quality of the underlying securities in the portfolio. The greater the exposure to non-investment grade stocks, the higher the risk; and vice versa.
- **Performance** – the total return that the fund has generated over a period of time needs to be investigated and reviewed in conjunction with the yield it generates, to see whether higher yields are being achieved through investments in lower-quality securities, which may make the share price of the bond fund more volatile.
- **Fees and charges** – the individual and total expenses of the fund need to be established in order that the impact on performance can be assessed, and comparisons made with comparable funds.

- **Fund managers** – bond markets have become increasingly complex, so it is important to assess the professional expertise of the fund management team. This assessment should be conducted over an extended period, spanning various market conditions to thoroughly evaluate their adaptability, decision-making capabilities and consistency in navigating those complexities.

Direct and indirect investments are not mutually exclusive strategies for achieving the bond representation needed in a portfolio. For optimal results, a portfolio manager should look at whether combining these strategies might generate a portfolio that better meets the investor's investment objectives and risk tolerance.

For example, for an investor it might be a practical option to hold a range of government bonds of varying maturities directly in the portfolio, and gain exposure to corporate bonds and emerging market bonds through an actively managed bond fund, tracker fund or ETF.

Constructing a bond portfolio that is internationally diversified could also be achieved in the same way, as doing this by direct investment can be impractical for all but the largest investors. Even if it can be achieved, it exposes the investor to exchange rate risk. A bond fund can, therefore, provide this diversification, and certain funds will effectively manage the exchange rate risk by hedging their currency exposure.

Investors should also take into account the different tax consequences of directly held bonds versus managed funds.

3.3 The Role of Equities in a Portfolio

Equities have a higher risk/reward profile than other securities. The attractiveness of equities lies in their long-term potential to counter the effects of inflation and also to supply a level of income in the form of a dividend.

However, the returns that they produce over the short to medium term can vary greatly; and, without dividend income, over the longer term also. At times, bonds have generated greater returns.

Although capital performance is often the focus of equity returns in the short term, historically, strong dividend growth has proved to be the most important determinant of equity returns over the longer term. Dividend growth is cyclical, but where companies have been able to deliver long-term dividend growth, it has also served to provide equities with the potential for a stable and rising income stream.

In recent years, the proportion of equities held in a portfolio has reduced in line with the rising use of ETFs, alternative investments and derivatives. Despite this, equities still have a major part to play in the investment portfolio of all investors; this can be achieved either by direct investment in shares, indirectly through investment funds, or by a combination of both.

The main risks associated with holding shares can be classified under three headings:

- **Price risk** – the risk that share prices in general might fall. In such a case, even though the company involved might maintain dividend payments, investors could face a loss of capital. For example, in the stock market crash of October 1987, known as Black Monday, US and equities in other countries fell by nearly 20% in a single day, with some shares falling by even more than 20%.

Price risk is not uniform across the market; it varies between companies. For example, volatile or aggressive shares (commonly found in sectors such as telecoms or technology) tend to exhibit more price risk than more defensive shares (such as utility companies and general retailers). There are also distinctions between value versus growth investment styles, and large versus small companies. As well as general collapses in prices, any single company can experience dramatic falls in its share price when it discloses bad news, like the loss of a major contract.

- **Liquidity risk** – the risk that shares may be difficult to sell at a reasonable price. This typically occurs when share prices in general are falling, when the spread between the bid and offer prices may widen. Shares in smaller companies tend to have a greater liquidity risk than shares in larger companies; smaller companies also tend to have a wider price spread than larger, more actively traded companies.
- **Issuer risk** – the risk that the issuing company collapses and the ordinary shares become worthless. This may be very unlikely for larger, well-established companies, but it remains a real risk and can become of increasing concern in times of economic uncertainty. The risk for smaller companies can clearly be more substantial.
- **Volatility** – often seen in equity prices as markets react to economic and company news.

Although many investors attempt to buy at the bottom and sell at the top of the equity market, few (if any) are consistently successful. In fact, given the existence of dealing costs and equities' record of outperforming government bonds and cash deposits, investors probably stand to lose more from being out of the equity market periodically than by remaining in it for the long term (a philosophy known as 'time in the market, not timing the market'). As many investors often find to their cost, markets can under- and overshoot their true (or fundamental) values, often for sustained periods of time. This requires investors to have a sensible view of the time horizons they should have when considering investing in equities. Investment in equities should undoubtedly be regarded as a long-term investment, and equity investors must be able to remain invested over a period of at least five years, if not longer.

3.3.1 Equity Funds

As an alternative to direct investment or to complement direct holdings, an investor can also utilise the wide range of equity mutual funds or ETFs that are available. Even where an investor has the financial resources for a direct investment portfolio of equities, it is normal for an investment fund, such as a mutual fund or ETF, to be used to achieve exposure to certain markets or specialist sectors.

There is a dizzying array of investment funds available for equity investment, and it is important to understand the types of equity funds that are available.

When looking to construct the equity element of an investment portfolio, a portfolio manager will be concerned with ensuring that they hold investment funds that will give exposure to varying opportunities in different stock markets around the world. With this in mind, they may start with a global asset allocation that gives weighting to markets that they consider will produce the performance they are seeking and provide the right balance of risk and reward to meet the investor's objectives or fund mandate.

Some of the factors to be considered when constructing the equity element of a portfolio include:

- In order to identify what funds might be suitable, it will be necessary to identify whether a fund invests in global, regional or a single country's markets. There could be an element of conflict if the portfolio manager is following a global asset allocation, yet also buys a global fund; however, the portfolio manager has no control over the asset or geographic allocations, as this is determined by the fund manager.
  A client expects their portfolio manager to at least select the asset allocation to meet their agreed risk and return expectations, as opposed to the portfolio manager outsourcing the asset allocation to another firm/fund which might not meet the client's original asset allocation expectations.
- As well as looking at the global asset allocation of a portfolio, a portfolio manager will also want to consider what specific market sectors they expect to perform best, in line with the objective and risk profile that has been agreed with the client. In this example, they may, therefore, want to achieve their exposure to the UK market by selecting funds that invest in specific sectors (eg, banking, oil, pharmaceuticals and telecoms). Equally, they could achieve a part of their international exposure by selecting a fund that invests in, say, global pharmaceutical stocks.
- By contrast, and depending upon the funds available to invest, they may determine that the exposure to other markets can be best achieved through a fund specialising in that market, such as Japan, or across a region such as Europe or Asia.
- As well as considering geographical regions and market sectors, the portfolio manager may want to take account of the market capitalisation of the stocks in which the funds will invest. Therefore, the fund's investment strategy may focus on large, mid or small cap stocks, or a combination of these.
- The portfolio manager may also want/have to include investment themes within the portfolio, so that ethical/responsible/sustainable funds, or those exposed to a specific region or sector (eg, emerging markets or technology funds) are represented.
- As well as looking at the geographical area in which a fund invests, consideration needs to be given as to whether the funds to be selected will be actively managed, passively managed or a combination.

Investment funds are widely utilised in investment portfolios by both institutional and retail investors alike and offer a number of advantages over direct investment in shares, bonds and property, including:

- risk is spread and, therefore, reduced
- access to professional, expert and full-time investment management expertise
- cost-effective
- access to markets that could not otherwise be achieved, and
- investor retail protection, as they are heavily regulated and supervised, for example, so long as they comply with the **UCITS** rulings.

Unsurprisingly, however, there are also drawbacks that the adviser and portfolio manager must be aware of and take account of in their planning:

- Access to professional investment management does not necessarily come cheaply. Mutual funds may impose initial charges on investment that can be considerable, and the fund itself will need to bear the cost of trading, administration and the fund manager's annual management charge.
- Charges will clearly have an impact on the investment performance of the fund and reduce the returns that are made. A portfolio manager needs to take account of these charges in their decision-making. They also need to assess the relative merits of mutual funds and ETFs, which can sometimes produce the same returns at relatively lower costs. In addition, when performance valuations are sent to them, clients need to know whether these are before or after the deduction of fees and charges.

- The other major consideration is the performance produced by the fund's managers. The range of returns produced by funds invested in similar markets and sectors can be considerable, and selecting a fund that can produce consistent long-term returns requires research.
- The returns generated by actively managed funds are not guaranteed, which can beg the question as to why an investor would want to pay potentially higher fees instead of switching to a lower cost alternative such as a tracker fund, which will perform in accordance with its benchmark.
- It should be noted that often, equity funds investing overseas are not hedged for currency risk and therefore this risk is borne by the investor.

3.4 Selecting Funds for a Portfolio

One of the most frequently posed questions in the investment world is, is past performance a reliable guide to future performance? Another way of phrasing this question would be to ask what is the probability of this year's above-average-performing fund still being an above-average performer next year? One of the greatest myths perpetuated by many product providers is that the better a fund's past performance and the higher its level of charges, the greater its chances of outperforming the peer group in the future. Other considerations in recommending a fund are the risks of the fund and whether the fund (area and structure) is suitable for the client mandate and level of risk tolerance.

Although past performance can offer initial evidence of a fund manager's skill, investment style, and the risks taken to generate this performance, it must be considered with caution as several factors can influence this performance, including the following:

- **Chance** – the chance that good performance could be the result of luck not skill. For example, if market conditions were particularly favourable during a period of good performance.
- **Change** – even if good performance is attributable to skill, very few fund managers manage the same portfolio for any considerable length of time. Moreover, manager skill, especially the ability to exploit a particular investment style or rotate between styles, is rarely consistent in changing market conditions.

Unsurprisingly, therefore, this leads to a significant amount of research being undertaken. There are a number of independent rating agencies that provide ratings for investment funds (see section 3.4.1, below), most of whom provide this data free of charge to portfolio managers. The majority of these ratings are based on risk- adjusted past performance, though some place considerable weight on qualitative factors, such as how a portfolio manager runs their fund. However, even the evaluation of qualitative factors only provides an indication of how a certain portfolio manager is likely to perform when adopting a particular investment style under specified market conditions.

A simple conclusion can be reached: past performance should never be used as the sole basis on which to judge the suitability of a fund or, indeed, be relied upon as a guide to future performance. Moreover, it goes without saying that funds that impose high charges will put the investor at an immediate disadvantage and prove to be a significant drag on subsequent fund performance.

Although there is no fail-safe way of ensuring that a particular fund will consistently achieve above-average performance, the following sources of information improve the chances of selecting an above-average performing fund.

3.4.1 Independent Fund Ratings

There are a number of independent ratings agencies that provide ratings for investment funds, most of whom provide this data free of charge to portfolio managers. Some of the main ratings agencies and the differing approaches they adopt are considered below.

Lipper

Lipper is a fund-rating system that provides a simple, clear description of a fund's success in meeting certain investment objectives, such as preserving capital, lowering expenses or building wealth.

Lipper ratings are derived from formulae that analyse funds against a set of clearly defined metrics. Funds are compared to their peers and only those that truly stand out are awarded Lipper Leader status.

Funds are ranked against their peers on each of four measures: total return, consistent return, preservation, and expense. A fifth measure – tax efficiency – applies in the US. Scores are subject to change every month and are calculated for three, five and ten-year periods, and overall. The overall calculation is based on an equal-weighted average of percentile ranks for each measure over each of these periods.

For each measure, the highest 20% of funds in each peer group are named Lipper Leaders (with a rating of 5). The next 20% receive a rating of 4; the middle 20% are rated 3; the next 20% are rated 2, and the lowest 20% are rated 1.

Morningstar

Morningstar's rating system is often called the star rating and is a purely quantitative, backward-looking measure of a fund's past performance, measured from one to five stars. There is also the Morningstar Analyst Rating, which gives a rating of gold, silver or bronze based on an analyst's convictions of a fund's ability to outperform its peer group and/or relevant benchmark on a risk-adjusted basis over a full market cycle. Morningstar fund analysts evaluate funds based on five key pillars:

1. **Process** – what is the fund's strategy and does management have a competitive advantage enabling it to execute the process well and consistently over time?
2. **Performance** – is the fund's performance pattern logical given its process? Has the fund earned its keep with strong risk-adjusted returns over relevant time periods?
3. **People** – what is Morningstar's assessment of the manager's talent, tenure, and resources?
4. **Parent** – what priorities prevail at the firm? Stewardship or salesmanship?
5. **Price** – is the fund a good value proposition compared with similar funds sold through similar channels?

Though some place considerable weight on qualitative factors, such as how a portfolio manager runs their fund, even the evaluation of qualitative factors only provides an indication of how a certain portfolio manager is likely to perform when adopting a particular investment style under specified market conditions.

Although none of these ratings agencies claim to have predictive power, they seek to provide a valuable tool for portfolio managers to filter out those funds that consistently underperform. Indeed, research tends to suggest that funds awarded a top rating by one of these ratings agencies improve upon the 50:50 chance of that fund being an above-average performer in the future.

3.4.2 Fund Fact Sheets

With so many funds available, the ratings agencies provide a valuable way of filtering them down to a manageable number so a portfolio manager can review whether they are suitable for recommendation to a client. The manager will then need to drill down into the detail of these particular funds, and this can be achieved using the readily available fund fact sheets.

The typical content of a fund fact sheet includes:

- investment objective
- fund profile and its asset allocation
- portfolio composition
- portfolio turnover
- fund performance, and
- risk measures.

Risk measures are an area of growing importance, given the increasing volatility in all asset classes and the expected lower returns for the future. Portfolio managers must make sure that above all else, the securities' levels of risk match the client's appetite for risk; the suitability of an investment is more important than the performance. Note also that an investment in isolation may not appear to be suitable for a client's appetite for risk; however, combined with another investment that is very different to it, diversification benefits (and therefore risk reduction) can be achieved.

The section on risk measures assesses the fund using a variety of industry-standard measures, with a history of at least three years. These measures assess a fund's volatility as well as looking at its risk against a given benchmark and typically include:

- **Standard deviation** – this measures the dispersion of the fund's returns over a period of years. Funds with a higher standard deviation are generally considered to be riskier, as their returns are more volatile so there is a greater risk of loss.
- **R-squared** – also called R^2, this measures the degree to which the fund's performance can be attributed to the index against which it is benchmarked. For example, if a fund is benchmarked against the S&P 500 and has an R-squared of 20%, this would indicate that 20% of its returns can be attributed to movements in the index itself. An R-squared value of 70% (ie, 0.7) or higher Is generally considered strong.
- **Information ratio** – this is a measure of the risk-adjusted return achieved by a fund. A high information ratio (ie, of 0.5 or above) indicates that when the fund takes on higher risks (so that its standard deviation rises), it increases the amount by which its returns exceed those of the benchmark index. It is, therefore, a sign of a successful fund manager.
- **Sharpe ratio** – this is simpler, and measures the fund's return over and above the risk-free rate. The higher the Sharpe ratio, the better the risk-adjusted performance of the portfolio and the greater the implied level of active management skill. However, the Sharpe ratio makes no allowance for the extra risk incurred in achieving those higher returns. See section 5.4 for more information on the Sharpe ratio, among other performance ratios.

3.4.3 Fund Manager Ratings

As well as assessing the fund itself, many portfolio managers believe it is also important to consider individual fund manager ratings. While some funds are managed in a team-based approach, others have a star fund manager(s) who have been responsible for their high performance levels; and fund managers regularly switch funds and jobs.

Organisations such as Morningstar and Citywire evaluate fund manager performance, from which they produce fund manager ratings to identify those who have the best risk-adjusted performance track records over a certain period of time. In doing so, these organisations typically assess both quantitative (eg, risk-adjusted returns and tracking error) and qualitative factors (eg, the manager's investment strategy and adhere to stated objectives), in order to gauge the effectiveness and suitability of the fund managers in delivering value to investors. The evaluation process typically assigns weights to these various factors, based on their importance in generating sustainable long-term performance.

Once these factors are analysed, composite scores or ratings are then generated that reflect the overall quality of the fund manager's performance relative to peers. These ratings often serve as a valuable tool for investors seeking to identify fund managers with a demonstrated track record of delivering value while managing risks effectively.

3.4.4 Fund Group Publications

Many fund management groups exploit the internet to provide greater levels of detail about the funds that they are managing and prospects for different market sectors. For this, they regularly schedule web-based presentations about new funds and markets or arrange online conferences where a fund manager is questioned about their investment strategy and plans.

3.4.5 Fund Size

As an actively-managed fund becomes larger, its performance may suffer, depending on the depth of the markets and liquidity of the assets in which it invests. For example, consider a small-cap fund, which typically invests in companies with lower market capitalisations that may have less trading volume and liquidity compared to large-cap stocks. If the fund manager compensates for this increase in fund size by investing in more underlying securities, in order to mitigate the risk of concentration, then they may have less time to conduct in-depth research and monitor each of the fund's holdings, and may move the market against the fund if they were to trade a sizeable amount of stock. Alternatively, if the number of stocks remains unchanged, then the fund manager may run the risk of holding too much in a single asset, which could result in liquidity issues as and when they may wish to sell out of the position.

On the other hand, large funds can spread their costs over a wider base, benefiting from economies of scale. As the size of the fund increases, the fixed costs associated with managing it can be distributed across a larger pool of assets. This can result in lower expense ratios for investors.

Larger funds may also have access to a broader range of investment opportunities. With more substantial resources at their disposal, fund managers can explore and invest in a diverse array of asset classes, markets and strategies that are perhaps not accessible to smaller funds. This diversification can help mitigate risks and potentially enhance returns.

Larger funds may have increased bargaining power when dealing with brokers and other service providers – eg, to negotiate lower fees for executing trades, accessing research reports, and obtaining other essential services. This influence extends beyond traditional considerations, and can encompass broader societal and environmental considerations; and by leveraging their significant ownership stakes, fund managers can drive positive change, ultimately enhancing long-term value for investors.

Data on fund size can be obtained from the fund's fact sheet, as well as financial websites, platforms and publications.

3.4.6 Fund Charges

The types of charges that a fund may levy are covered in chapter 4, section 1.2.1.

High charges put a fund's potential performance at an immediate disadvantage. Active funds generally have higher charges than passive funds, while open-ended funds generally have higher charges than closed-ended funds. Further, funds operating in more niche or specialist areas of the market (eg, emerging markets, or a sector-specialist fund) generally charge more than those operating in broader, more mainstream sectors (eg, FTSE 100 or S&P 500).

The fact that many index tracker funds do not have either an initial or exit charge puts their future performance prospects at an immediate advantage. By contrast, those trackers that closely tie their stock selection to the index they seek to outperform without adjusting their charges almost certainly guarantee underperformance against the index they seek to outperform.

That said, investors should carefully consider their financial goals, risk tolerance and investment time horizon before selecting between active and passive funds. While passive funds often offer lower fees and may outperform actively managed funds over the long term, active management can provide opportunities for outperformance in certain market conditions or with skilled managers. Investors should be wary of solely focusing on fees, as many other factors also play crucial roles in determining the success of an investment. Ultimately, the key is to construct a well-diversified portfolio that aligns with an investor's objectives and preferences.

Fund charges are usually detailed in the same data sources as those which publish fund sizes.

4. Risk and Return

Portfolio managers need to be able to understand performance in terms of the risk undertaken and the divergence from any stated mandate or benchmark. It is not about chasing that performance, but delivering the expected performance within the client's level of risk. Has the client been rewarded for undertaking the risk of investing, and to what extent?

A higher amount of volatility is justified so long as there has been a higher amount of performance, and the level of actual risk is within the client's level of tolerance. This would apply equally with lower volatility and lower risk. Did the client sign up to the lower levels? The investment strategy could have protected the client's assets, but was that what the client signed up to, in terms of lower risk levels?

4.1 The Time Value of Money

Learning Objective

6.1.1 Understand the time value of money

As we saw in section 5 of chapter 5, money has a time value. In other words, money deposited today will attract a rate of interest over the term it is invested.

Time value can be readily understood by considering the following example. If a person has a choice between $1,000 now or in 12 months' time, they will clearly choose to have it now, as they could invest it and earn interest and so have a larger amount in a year's time. This shows that money has a time value, and interest can be seen partly as the return required by the lender to compensate for the time value of money that they are lending to the borrower.

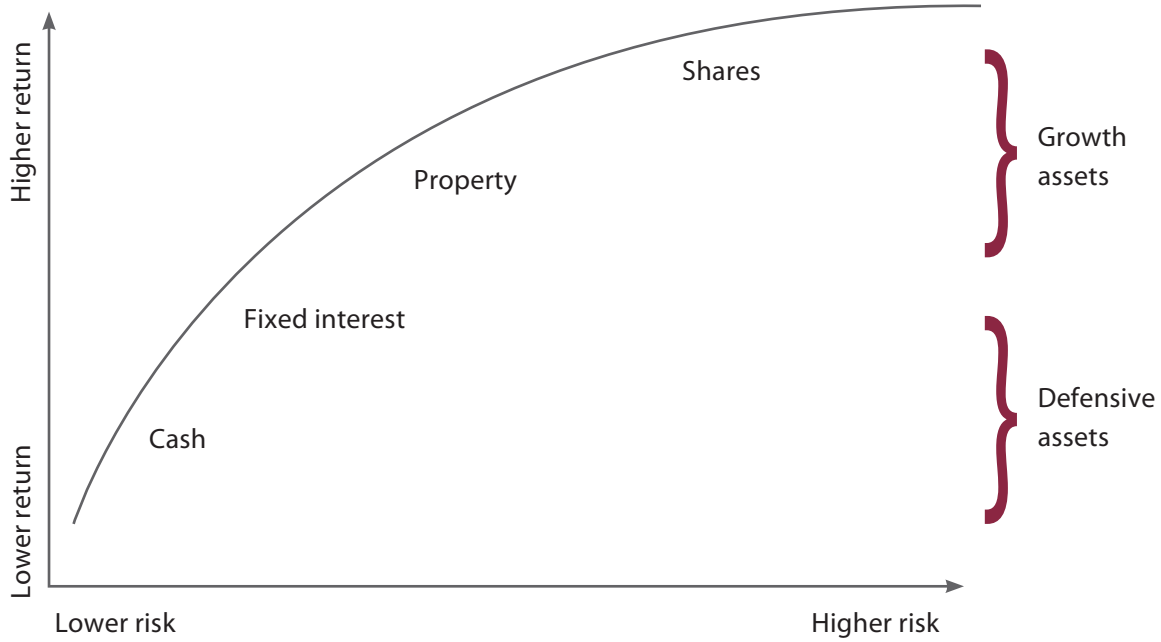
This then leads us on to consider what is an acceptable return.

4.2 Risk-Free Rates and the Risk Premium

Learning Objective

6.1.2 Understand the varying investment returns from the main different asset classes – 'risk-free' rates of return and the risk premium

Staying with the theme of measuring performance, it makes sense to also evaluate this, allowing for the risk of holding the underlying assets. (Note that the diagram is intended to give illustrative suggestions of risk and return only.)



The purpose of this is to understand whether the performance of a fund is a result of its underlying assets and the way in which it has been constructed, and whether the risk taken to achieve it is sufficient to warrant the return. It is also important to understand, in terms of the return, if the performance was just due to the fund manager following his benchmark, which can be obtained from such measures as looking at the tracking measure and R-squared ratio (see section 3.4.2 of this chapter).

The concept behind risk is that the riskier the investment, the greater the return should be, to reward the investor for accepting that risk. To be able to assess what that additional return should be, you need a benchmark against which to assess it, and this is known as the risk-free rate of return. Recall that usually, the return on short-dated government bonds or Treasury bills is used as the risk-free rate of return. (Risk-free rates are also referred to as minimum-risk rates to make it clear that they are not risk free, but give a minimum amount of return that could be achieved by accepting some of the lower levels of risk.)

Apart from default risk, government bonds are still subject to market risk – changes in general interest rates will affect their value – and so short-dated bonds are used because their imminent repayment reduces the effect of any price movement.

Once you have a benchmark risk-free rate, you can then compare the returns on other investments against it and assess whether the additional return is worth the additional risk. This additional return is known as the risk premium.

This principle can be understood by asking some simple questions:

- What additional return will an investor require for the extra risk involved in buying corporate bonds rather than an equivalent government bond?
- What additional return will an investor demand for investing in equities as opposed to an equivalent corporate bond?
- What additional return will an investor demand for investing in small cap stocks?

What is used as the benchmark risk-free rate of return can change depending upon what is being compared. As well as comparing one asset class to another, this concept of risk-adjusted returns can be used to compare similar investments. In the example below, we discuss other benchmark returns, as to undertake an investment strategy, the client has agreed to a level of risk so the portfolio manager should at least try to beat the risk-free rate of return. If not, the best advice for the client would be to sit in cash or fixed interest. However, as discussed, both of those asset classes suffer some sort of risk, such as Inflation and interest rate risks.

Example

An investor can purchase a mutual fund whose investment objective is to track a major index and therefore produce a return that is as close as possible to the performance of that index. Alternatively, the investor may purchase an actively-managed fund that invests in the same markets.

If the actively managed fund produces a return of 10% over one year, is that good, bad or indifferent? The answer is that it needs to be compared to the performance of both the index and the tracker fund. Let's assume that the tracker fund has produced the expected return and has matched that of the index. For example, if the index has increased by 12% over the same period, then on the face of it, the performance of the actively managed fund is not good.

Determining whether a fund's performance is favourable is not as straightforward as looking at a single number, though. Rather, an assessment hinges on various factors such as the fund's objectives, and investment philosophy and process. For example, if an actively managed fund aims for steady, low-volatility returns over the long term, then this might align well with the preferences of a cautious investor. Not all clients are chasing market-beating returns; hence, a 10% return might suffice for them and be more suitable than the higher-performing fund.

Alternatively, if the actively managed fund has produced a return of 10% over the year, and the tracker has produced a return of 9%, what then? From an initial view, it may seem that the actively managed fund has produced better results. What about the charges though? As already discussed, actively managed funds charge more on the basis that they involve active management, research and expertise in selecting securities with the aim of outperforming the market. If this actively managed fund charges, say, 1.2% a year and a tracker just 0.2% a year, then the performance of both funds is effectively the same.

If the actively managed fund consistently produced returns after charges that bettered the tracker fund by, say, 2%, then there may be value in the investor entrusting their investment to the skill of the fund manager.

4.3 Measurement of Risk

Learning Objective

6.1.3 Understand how risk is measured – volatility, the significance of standard deviation as a measure of volatility, the importance and limitations of past performance data

As well as understanding the risk premium that is being taken on with an investment, it is also important to understand the volatility of the returns generated by that investment. The information produced by firms who analyse fund performance will regularly refer to 'volatility' and 'standard deviation'.

Volatility refers to changes in a security's value, and particularly to the uncertainty about the size of any changes that might take place. A higher volatility means that a security's price can change dramatically over a short time period in either direction. A lower volatility means that a security's value does not fluctuate dramatically, but changes in value at a steady pace over a period of time. Hence, volatility is a measure of the extent to which investment returns fluctuate around the mean.

Volatility is measured by the standard deviation of these returns. Standard deviation allows changes in price to be measured so that the risks being assumed with a security can be compared, to see how much more volatility (ie, risk) is being accepted in exchange for higher returns. As a general principle, the higher the standard deviation of the returns, then the greater the risk of not getting the expected return because of the uncertainty of the return.

For example, suppose an investor is considering investing in a sector of the market and has identified two similar investment funds, both of which have delivered the same historic return. If one fund has a much greater standard deviation than the other, then that may imply that the fund manager has taken greater risks to achieve the same return. The investor would logically select the one with the lower

standard deviation, as they can achieve the same return without being exposed to greater uncertainty or volatility – this is often referred to as risk (ie, the risk of not achieving the expected return). At the same time, though, an investment with a higher standard deviation can also represent a greater chance of outperformance, so this is not necessarily a drawback; ultimately, suitability of an investment will depend upon the investor's investment goals, risk tolerance and so on.

Note that one person's definition of risk can differ from that of another, though – while one person may consider 'risk' to be not achieving the required, for another it may be the risk of permanent financial loss, for example.

Standard deviation generally assumes that returns conform to a standard bell-shaped distribution. It is used to measure volatility historically, and very simply shows how market prices tend to cluster around an average – see chapter 5, section 4.1.2.

Volatility and standard deviation provide us with information about what has happened in the past, and this can be used to influence a choice between competing investments. It must be remembered, though, that historic guides are not a guide to future performance. Note also that standard deviation does not describe the split of upside/downside, in terms of riskiness.

Conclusion of Standard Deviation

Standard deviation (σ) is applied to the annual rate of return of an investment to measure the investment's volatility. Standard deviation, also known as historical volatility, is used by investors as a gauge for the amount of expected volatility. The higher the standard deviation, the riskier the investment, as it leads to more uncertainty.

Standard deviation is a statistical measurement that sheds light on historical volatility. For example, a volatile stock will have a high standard deviation while the deviation of a stable blue-chip stock will likely be lower. A large dispersion tells us how much the return on the fund is deviating from the expected normal returns.

Volatility Impact on Returns

Many investors realise that the stock market is a volatile place to invest their money, but it is this volatility that also generates the market returns that investors desire.

Another way to measure volatility is to take the average range for each period, from the low-price value to the high price value. This range is then expressed as a percentage of the beginning of the period. Larger movements in price creating a higher price range result in higher volatility. Lower price ranges result in lower volatility.

Market Performance and Volatility

There is a strong relationship between volatility and market performance. Volatility tends to decline as the stock market rises and increases as the stock market falls. When volatility increases, risk increases and returns decrease.

Assessing Current Volatility in the Equity Market

One way to assess volatility is to use the CBOE Volatility Index (VIX). The VIX measures the implied volatility (IV) in the prices of a basket of put and call options on the S&P 500 Index and is used as a tool to measure investors nervousness and tendency to avoid or hedge downside risk.

- A high reading on the VIX marks periods of higher stock market volatility. This high volatility also aligns with stock market bottoms.
- Low readings on the VIX mark periods of lower volatility. The periods of low volatility may last several years and are not as good for identifying market tops.

The VIX is intended to be forward-looking, measuring the market's expected volatility over the next 30 days.

4.4 Risk and Return Measures

Learning Objective

6.1.4 Understand the measurement of total return and the significance of beta and alpha

As we have already covered, total return refers to the growth in the capital value of an investment or portfolio, plus any income received over a period of time. For example, the total return to an investor for holding shares is any gain or loss as a result of share price movements, plus any dividends received.

When looking at the total return from a fund, beta and **alpha** are further terms that an investment and financial adviser will encounter when looking at reports of fund performance and, again, an understanding of their meaning and use is worthwhile.

Beta (β) is a measure of the average historic sensitivity of a fund's returns compared to the broader market:

- $\beta=1$ has the same level of risk as the overall market, so it would be expected to move in line with the overall market.
- $0 \leq \beta < 1$ means the security has less risk, so it would be expected to move in the same direction as the market, but by a smaller amount.
- $\beta > 1$ is riskier than the overall market, so it would be expected to move in the same direction, but by a greater amount.
- $\beta=0$ is uncorrelated with the market, so there is no clear relationship between the two.

Assessing the beta of a fund will, therefore, give an indication of how the fund may perform in certain market conditions. When considered alongside a client's risk tolerance, its significance becomes clearer. For a risk-averse investor, a fund with a high beta is potentially unsuitable, whereas one that has acted in line with market movements or defensively may be more appropriate.

Alpha (α) is used when looking at the performance of a fund or portfolio and refers to the extent of any outperformance against its benchmark. If a fund aiming to outperform a specified benchmark is not delivering the required investment performance relative to that benchmark, then the fund manager

could be keen to 'improve the alpha' of the fund – that is, to improve performance or achieve some outperformance by changing the composition of the fund. If this occurs, it is critical to understand the additional risk that is being taken on (or beta), so that the portfolio manager can judge whether the fund remains suitable for the client. Alpha is often referred to as the added value of the fund manager or return from stock selection (Fama decomposition).

Fama Decomposition of Total Return

This involves breaking down the total return into various components, listing how well the fund manager has done in terms of risk and return:

1. The return from the risk-free asset.
2. What return the client would expect based on their level of risk (return from client's risk).
3. Return from market timing (the beta that the fund manager has chosen by investing in the market).
4. The return from selectivity (return from active security selection).

4.5 Risk Diversification

Investment portfolio planning and diversification are essentially about trying to remove some of the inherent risks that exist in holding a portfolio of investments.

Investors generally choose to avoid unnecessary risk in their portfolios by holding appropriate proportions of each class of investment. The more conservative investor will hold a greater proportion of low-risk bonds and money market instruments. These lower-risk investments are likely to give rise to lower, but more predictable, returns. The more adventurous investor who can remain invested for the long term (ie, five years or more) will hold a greater proportion of medium- and high-risk equity investments, because higher risk means greater potential for higher returns. In addition, if we assume for a moment that risk can be equated to volatility, then a low-risk investor will also want a portfolio that exhibits low volatility of returns.

Essentially, the choice of investments is driven by the investor's attitude to risk and the fact that there is a trade-off between risk and return. However, diversification can remove some of the general investment risk without having to remove all high-risk investments from a portfolio. For example, an investor's portfolio might contain high-risk equity investments but, as the portfolio diversifies (ie, as the investor includes a wider range of companies' shares), risk diminishes, because unexpected losses made on one investment are likely to be offset by unexpected gains on another.

However, diversification cannot remove all of the risk. There are certain things, such as economic news, which tend to impact the whole market. As we saw in section 1.1 of this chapter, there are two types of risk: systematic risk, which affects the broader market, so it cannot be diversified away; and unsystematic risk, which relates to specific or individual investments so can be diversified away by holding a large number of securities operating within different industry sectors.

Effective diversification cannot be undertaken, however, without an understanding and appreciation of the concept of correlation and covariance, which was covered in chapter 5, section 4.2.

Diversification and risk reduction is achieved by combining assets whose returns have not moved in perfect step, or are not perfectly positively correlated, with one another. As we saw in section 1.1. of this chapter, modern portfolio theory (MPT) states that by combining securities into a diversified portfolio, the overall risk will be less than the risk inherent in holding any one individual stock, and so this will reduce the combined variability of their future returns. Each asset class has a significantly different level of risk and return, and each asset class has a level of correlation to the others. Investors can use these differences in performance to consider how likely their investments are to meet their objectives and appetite for risk. It can be possible to even out investment performance over time, by spreading investments across different asset classes.

The best diversification benefits between two assets are achieved where there is zero correlation, since this means their returns move independently of each other. When returns are perfectly negatively correlated, then the returns on one asset will offset the other, thus resulting in a net zero overall return. A perfectly positive correlation (when security returns move in the same direction and in perfect step with each other) is the only instance when diversification benefits cannot be achieved.

The following conclusions can be drawn:

- Although it is perfectly possible for two combinations of two different securities to have the same correlation coefficient as one another, each may have a different covariance, owing to the differences in the individual standard deviations of the constituent securities.
- A security with a high standard deviation in isolation does not necessarily have a high covariance with other shares. If it has a low correlation with the other shares in a portfolio then, despite its high standard deviation, its inclusion in the portfolio may reduce overall portfolio risk.
- Portfolios designed to minimise risk should contain securities as negatively correlated with each other as possible and with low standard deviations to minimise the covariance.

5. Performance Measurement

When constructing a client's portfolio, it is essential to understand their investment objectives, risk tolerance and tax position to ensure that the investments chosen are suitable and meet their expectations of how the portfolio is to be run.

An important part of determining the risk tolerance is how a client will react to the volatility of their returns. The more a client is concerned about maintaining capital values, the more orientated their portfolio will be to lower-risk assets such as bonds and cash deposits. If this is a lesser concern, portfolios will be more oriented to stocks and other risk assets.

When reviewing a portfolio, a client will be interested in the after-tax return. Given the different tax rates in force for income and capital taxes, this has become an important factor in portfolio construction. Even within asset classes, this may influence whether the portfolio manager should invest in direct or collective vehicles.

The risk/return profile also helps to determine the allocation of stocks versus bonds and other asset classes. Alternative assets may be included in a portfolio if they can provide diversification opportunities, as returns may be uncorrelated with the traditional asset classes (equities, bonds and cash), and if a client is comfortable with their relative illiquidity.

It is important that investors and other interested parties are able to monitor the performance of a portfolio or fund in order to assess the results that the portfolio manager has produced. In this section, we will consider the use of performance benchmarks and look at how performance can be measured and the results analysed.

5.1 Portfolio Benchmarks

Learning Objective

6.4.1 Understand how benchmarking can be used to measure performance

Once the portfolio has been constructed, the portfolio manager and client need to agree on a realistic benchmark against which the performance of the portfolio can be judged. The choice of benchmark will depend on the precise asset split adopted and should be compatible with the risk and expected return profile of the portfolio. Where an index is used, this should represent a feasible investment alternative to the portfolio constructed.

Portfolio performance is rarely measured in absolute terms, but in relative terms against the predetermined benchmark and against the peer group. In addition, indexed portfolios are evaluated against the size of their tracking error, or how closely the portfolio has tracked the chosen index. Tracking error arises from both underperformance and outperformance of the index being tracked.

It is essential that the portfolio manager and client agree on the frequency with which the portfolio is reviewed, not only to monitor the portfolio's performance, but also to ensure that it still meets with the client's objectives and is correctly positioned given prevailing market conditions.

The main ways in which portfolio performance is assessed are as follows:

- **Comparison with a relevant bond or stock market index** – An index comparison provides a clear indication of whether the portfolio's returns exceed that of the bond or stock market index that is being used as the benchmark return. As well as the main stock market indices that are generally seen, many sub-indices have been created over the years which allow a precise comparison to be made.
- **Comparison to similar funds or a relevant universe comparison** – Investment returns can also be measured against the performance of other fund managers or portfolios which have similar investment objectives and constraints. A group of similar portfolios is referred to as an investment universe.
- **Comparison to a custom benchmark** – Customised benchmarks are often developed for funds with unique investment objectives or constraints. Where a portfolio spans several asset classes, a composite index may need to be constructed by selecting several relevant indices and multiplying each asset class weighting to arrive at a composite return.

5.1.1 Stock Market Indices

Stock market indices have the following uses:

- **To act as a market barometer** – most equity indices provide a comprehensive record of historic price movements, thereby facilitating the assessment of trends. Plotted graphically, these price

movements may be of particular interest to technical analysts, or chartists, and momentum investors, by assisting the timing of security purchases and sales, or market timing.

- **To assist in performance measurement** – most equity indices can be used as performance benchmarks against which portfolio performance can be judged.
- **To act as the basis for index tracker funds, exchange-traded funds (ETFs), index derivatives and other index-related products**.
- **To support portfolio management research and asset allocation decisions**.

There are a number of different types of market index, including:

- **Price-weighted index** – these are constructed on the assumption that an equal number of shares are held in each of the underlying index constituents. However, as these equal holdings are weighted according to each constituent's share price, those constituents with a high share price relative to that of other constituents have a greater influence on the index value. The index is calculated by summing the total of each constituent's share price and comparing this total to that of the base period, although such indices are difficult to justify and interpret. The most famous of these is the **Dow Jones Industrial Average (DJIA)**.
- **Market capitalisation-weighted index** – in these indices, larger companies account for proportionately more of the index as they are weighted according to each company's market capitalisation. Most of the world's major indices are market capitalisation-weighted, such as the FTSE 100 and FTSE All-Share indices, the S&P 500 and other S&P indices, and the Morgan Stanley Capital International (MSCI) indices. Also called a market cap-weighted or market value-weighted index.
- **Equal-weighted index** – in certain markets, the largest companies can comprise a disproportionately large weighting in the index and, therefore, an index constructed on a market capitalisation basis can give a misleading impression. An equal-weighted index assumes that equal amounts are invested in each share in the index. Also called an unweighted index.
- **Capped** – a type of market index that has a limit on the weight of any single security, setting a maximum percentage on the relative weighting of a component that is determined by its market capitalisation.
- **Fundamental** – a type of equity index in which components are chosen based on fundamental criteria as opposed to market capitalisation. Fundamentally-weighted indices may be based on fundamental metrics such as revenue, dividend rates, earnings or book value.

5.1.2 Composite Benchmarks

As mentioned in section 5.1, customised benchmarks are often developed for funds with unique investment objectives or constraints.

Where a portfolio spans several asset classes, then a composite index may need to be constructed by selecting several relevant indices and then multiplying each asset class by a weighting to arrive at a composite return.

An example is the private investor indices produced by the UK-based Personal Investment Management & Financial Advice Association (PIMFA) which is a leading trade association for firms that provide investment management and financial advice. Their MSCI PIMFA Private Investor Indices are produced in conjunction with MSCI, one of the world's leading index providers and consists of five multi-asset risk reward portfolios that reflect the long-term investment strategies and performance of UK wealth managers investing on behalf of their clients.

5.2 Measuring Portfolio Performance

Learning Objective

6.4.3 Understand the terms money-weighted rates of return; time-weighted rates of return

Reporting the performance of a portfolio or a mutual fund is clearly essential, as portfolio managers will use the results to compare the performance against a benchmark and against competing funds. As a result, there are international standards on how returns should be calculated and presented known as Global Investment Performance Standards (GIPS). GIPS is a set of standards for the presentation of investment performance information, established by the Chartered Financial Analyst (CFA) Institute in 1999, with the aim of creating ethical, global and industry-wide methods of communicating investment results to prospective clients.

There are three main methods used to measure portfolio performance:

1. Holding period yield (HPR) – sometimes referred to as total return.
2. **Money-weighted rate of return (MRWW)**.
3. **Time-weighted rate of return (TWRR)**.

5.2.1 Holding Period Return (HPR)

HPR simply measures how much the portfolio has increased in value over a period of time and expresses it as a percentage. It is calculated as follows:

Holding period return = (Price received at maturity – Price purchased) / Price purchased

One limitation of HPR is that it does not take into account the timing of cash flows into and out of the fund, so it is not a particularly useful measure for most investment funds. Instead, the money-weighted and time-weighted rate of returns are used.

5.2.2 Money-Weighted Rate of Return (MWRR)

The MWRR is used to measure the performance of a fund that has had deposits and withdrawals during the period being measured. It is also referred to as the **internal rate of return (IRR)** of the fund. The money-weighted rate of return calculates the return on a portfolio 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, plus
- any income or capital distributions made from the portfolio during that period.

One of the main drawbacks of this method is that calculating the return is an iterative process and so is a more time-consuming calculation than other methods.

5.2.3 Time-Weighted Rate of Return (TWRR)

The time-weighted rate of return (TWRR) removes the impact of cash flows on the rate of return calculation by breaking the investment period into a series of sub-periods. A sub-period is created whenever there is a movement of capital into or out of the fund. Immediately prior to this point, a portfolio valuation must be obtained to ensure that the rate of return is not distorted by the size and timing of the cash flow.

The TWRR is calculated by compounding the rate of return for each of these individual sub-periods, applying an equal weight to each sub-period in the process. This is known as 'unitised fund performance'.

In many cases, the differences between MWRR and TWRR will be relatively small, but in certain circumstances wide variations can occur. As a result, the TWRR is more widely used.

5.3 Performance Attribution

Learning Objective

6.4.2 Know commonly used performance attribution techniques

Investors will want to assess the returns achieved by a fund manager to determine which elements of the strategy were responsible for the results, the amount in terms of basis points or percentage and the reasons for the results. The process is known as 'performance attribution'. This is to know what added and detracted value.

Performance attribution analysis attempts to explain why a portfolio had a certain return. It does so by breaking down the performance and attributing the results based on the decisions made by the fund manager on:

- asset allocation
- sector choice, and
- security selection.

We will look at how performance can be attributed by way of an example.

Example

We will assume that an investment fund had a fund value of $20 million at the start of the period we are considering and was valued at $18.75 million at the end, thus producing a negative return of 6.25%. The asset allocation of the fund was 75% in equities and 25% in bonds. The benchmark used for the fund assumed an asset allocation of 50% in equities and 50% in bonds. Over the period, equities produced a negative return of 10% and bonds a negative return of 5%.

The first step is to determine the absolute outperformance or underperformance of the fund relative to the benchmark, given the fund and benchmark statistics above.

Example

1. Fund performance relative to benchmark performance

Using the figures given above, we can determine the performance of the benchmark as follows:

Benchmark	Asset Allocation	Value at Start of the Period	Return	Value at End of the Period
Equities	50%	$10m	–10%	$9.0m
Bonds	50%	$10m	–5%	$9.5m
Total		$20m		$18.5m

As the fund is actually valued at $18.75 million, it has outperformed the benchmark by $0.25 (ie, $18.75 million - $18.5 million). The next step is to calculate the absolute outperformance or underperformance of the fund relative to the benchmark attributable to asset allocation.

2. Fund performance attributable to asset allocation

The contribution of asset allocation to fund returns is established by applying the formula referred to above to both the fund's equity and government bond weightings and to the benchmark returns. The benchmark returns are as shown previously and the fund's returns are:

Benchmark	Asset Allocation	Value at Start of the Period	Return	Value at End of the Period
Equities	75%	$15m	–10%	$13.5m
Bonds	25%	$5m	–5%	$4.75m
Total		$20m		$18.25m

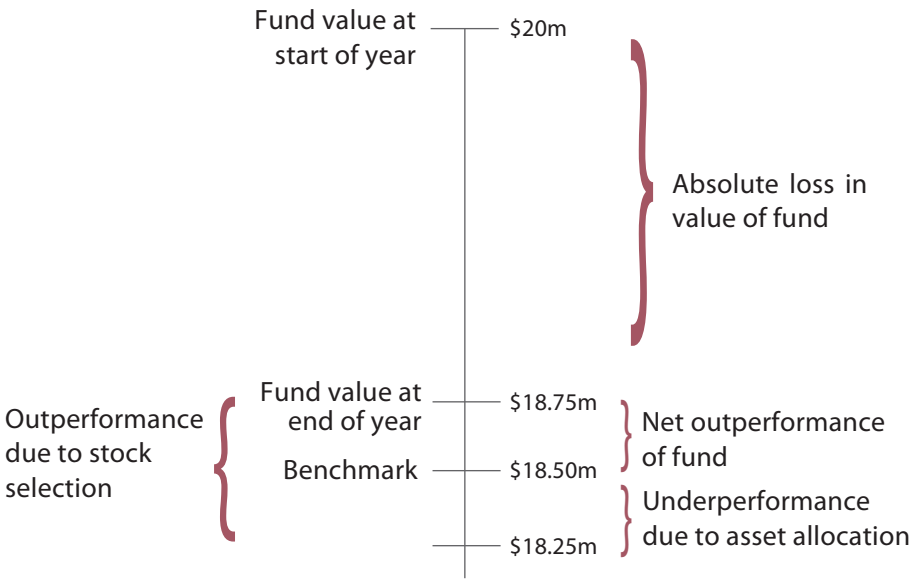
Poor asset allocation has caused the fund to underperform the benchmark by $0.25 million.

The final stage is to consider the impact that stock selection has had.

3. Effect of stock selection

The fund value at the end of the period is $18.75 million, whilst the fund value attributable to asset allocation is $18.25 million. Therefore, good stock selection has added $0.5 million to performance.

The outcome of this performance attribution is summarised in the diagram below.



Once a portfolio is in place, it is important to monitor it and look at the attribution (how and why a portfolio differed from its benchmark), as this can illustrate where there are biases and unintended risks in a portfolio. Note there are two types of security attribution:

1. backward looking (what has happened), and
2. forward looking (ex-ante) to find out where the risks lie in the future.

5.4 Performance Ratios

Learning Objective

6.4.4 Know the concept of measuring returns using: Sharpe ratio; Sortino ratio; Treynor ratio; maximum drawdown

Having calculated how a portfolio has performed, the next stage is to compare its performance against the market as a whole or against other portfolios. This is the function of risk-adjusted performance measurements.

There are a variety of industry-standard measures that provide details of a mutual fund's volatility, as well as indicating its risk against a given benchmark. To recap, the ones we have already covered in section 3.4.2 of this chapter are:

- Standard deviation measures the dispersion of the fund's returns, often calculated over three years. Funds with a higher standard deviation are generally considered to be riskier.
- R-squared measures the degree to which the fund's performance can be attributed to the index against which it is benchmarked.

Sharpe Ratio

The Sharpe ratio can help you determine which asset classes will deliver the highest returns while considering its risk. It was developed by Nobel Laureate William Sharpe.

The formula is shown below and the higher the ratio, the greater the implied level of active management skill.

$$\text{Sharpe ratio} = \frac{R_p - R_f}{\sigma} = \frac{\text{(Return on the portfolio} - \text{Risk-free return}}{\text{Standard deviation of the portfolio}}$$

where:

- R_p = the return on the portfolio
- R_f = the risk-free return
- σ = the standard deviation of the portfolio

Thus, the Sharpe ratio measures how many excess units of returns an investor can achieve over the risk-free rate for each unit of risk taken. The higher the Sharpe ratio, the better the risk-adjusted performance of the investment.

The Sharpe ratio aims to reveal how well an investment portfolio performs as compared to a risk-free investment, such as cash held at the bank. Reward can only be given above this risk-free rate of return. The Sharpe ratio calculates either the expected or the actual return on investment for an investment portfolio (or even an individual investment), by subtracting the risk-free investment's return on investment, and then dividing that number by the standard deviation (total risk) of the investment portfolio.

Sortino Ratio

The Sortino ratio is similar to the Sharpe ratio, however, it uses downside deviation instead of standard deviation in the dominator and uses a minimum acceptable return for risk-free rate (MAR). It differentiates harmful volatility from total overall volatility by using the asset's standard deviation of negative returns, called downside deviation. While using the risk-free rate is commonly used as the 'mean – minimum acceptable return', analysts can also use the expected return in the calculation.

$$\text{Sortino ratio} = \frac{\text{(Mean} - \text{Minimum Acceptable Return)}}{\text{Downside Deviation}}$$

Treynor Ratio

The Treynor ratio is also a measurement of the returns earned in excess of that which could have been earned on a risk-free investment. It takes a similar approach to the Sharpe ratio, but it is calculated for a well-diversified portfolio. Another key difference between the two metrics is that the Treynor ratio utilises beta, or market risk, to measure volatility instead of using total risk (standard deviation). Hence, this ratio is sometimes called a reward-to-volatility ratio, as it relates the excess return over the risk-free rate to the additional risk taken as measured by the beta of the fund or portfolio.

The Treynor ratio is calculated as follows:

$$\text{Treynor ratio} = \frac{\left(\text{Average return of a portfolio - Average return of the risk-free rate}\right)}{\text{Beta of the portfolio}}$$

The ratio attempts to measure how successful an investment is in providing compensation for the investment's inherent level of risk. When the value of the Treynor ratio is high, it is an indication that an investor has generated high returns on each of the market risks they have taken.

The Treynor ratio allows for an understanding of how each investment within a portfolio is performing. It also gives the investor an idea of how efficiently capital is being used.

Maximum Drawdown

Maximum drawdown is the maximum amount of loss from a high, through the drawdown, and back to the point where the high is reached again. There are numerous reasons for a drawdown, including market stress, giving back part of unrealised profits after a large increase in equity, or just poor trading. From a quantitative perspective, however, it is important to analyse the reasons that caused a particular fall and not exclude a fund based solely on absolute numbers.

End of Chapter Questions

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

1. **How can unsystematic risk be managed?**
   Answer reference: Section 1.1

2. **What expected return on an asset is demanded by an investor according to CAPM?**
   Answer reference: Section 1.3

3. **What is anchoring, when considering behavioural finance?**
   Answer reference: Section 1.6.1

4. **What is the difference between value and GARP investing?**
   Answer reference: Section 2.1.3

5. **What is bond immunisation?**
   Answer reference: Section 2.3

6. **What is an advantage of having cash in a portfolio?**
   Answer reference: Section 3.1

7. **What are three risks of holding equities?**
   Answer reference: Section 3.3

8. **Name five things you should find on a fund fact sheet?**
   Answer reference: Section 3.4.2

9. **What is volatility, and how does it differ from risk?**
   Answer reference: Section 4.3

10. **What is the difference between portfolio attribution and portfolio performance?**
    Answer reference: Section 5.2 and 5.3

Chapter Seven

Investment Advice

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This syllabus area will provide approximately 21 of the 100 examination questions

1. Advising Clients

In this section, we look at the framework within which financial advice is given to clients.

1.1 Client Categorisation

Learning Objective

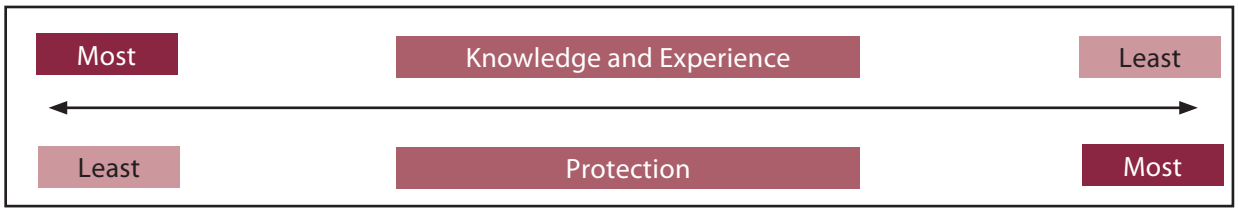
7.1.1 Know generally accepted approaches to different categorisations of investment clients

Regulatory rules in most countries differentiate between different types of clients. One of these rules requires firms to categorise clients, and the resulting categorisations are used to set different rules and provide different levels of protection to clients.

The products and services available to customers of financial services firms range from straightforward ones that can be readily understood and which are suitable for most people, to ones which are highly complex and are designed for the use of experienced investors. As a result, the underlying rationale for client categorisations is to protect ordinary investors who may not have adequate knowledge and experience to adequately evaluate the suitability of a product, and whether the product is consistent with their investment goals and financial situation. They also allow for different rules and approaches for experienced investors who are not in need of such protections.

The names given to different categories of clients differ from country to country, but an underlying theme is to differentiate ordinary 'retail investors' who require the greatest protection from 'non-retail' investors such as experienced investors, institutional investors and financial firms.

In summary, the approach can be seen to be that the greatest protection is afforded to those with the least knowledge and experience, as the diagram below indicates:



These classifications also drive the types of service and products available to clients, with higher risk and more complex ones available only to those classed as professional or institutional clients.

Wealth managers need to establish the appropriate client categorisation at the start of the relationship and keep it under review. It is sometimes possible to set a client category for all of the services offered by a firm or in relation to a specific trade, service or product.

In some countries, retail clients may request to be re-categorised as professional clients if they meet certain requirements set under regulation, relating to their investment experience, financial knowledge and financial situation. Wealth managers should be able to explain to clients the implications of choosing another regulatory category where that option is available, and that the client meets the required regulatory standards.

1.2 Client's Best Interest

Learning Objective

7.1.2 Know the definition of 'client's best interest' and the implications of this rule for a financial adviser

Financial advisers occupy a special position when dealing with their clients, given that clients are relying on their experience and integrity when they are advising them. This is especially the case for retail clients, who rely on personal advice and who may suffer significant loss if the advice is conflicted or is not of good quality.

This relationship is described as a fiduciary relationship in several jurisdictions and even if the term is not used in your country, then the underlying principle will be familiar. Such a relationship is one in which one person places special trust, confidence and reliance on, or is influenced by, another who has a duty to act for the benefit of that person. In discharging their responsibilities, that person must be absolutely open and fair, and act with integrity and in a manner consistent with the best interests of the client.

Example

In the US, Regulation Best Interest sets out a standard of conduct for broker-dealers when making recommendations to a retail customer:

'When making such a recommendation to a retail customer, you must act in the best interest of the retail customer at the time the recommendation is made, without placing your financial or other interest ahead of the retail customer's interests'.

A definition of 'client's best interests' could therefore be to act honestly, fairly and professionally in accordance with the best interests of the client. The responsibilities that must follow, therefore, include the following:

- Act in the utmost good faith for the client.
- Not make a profit from the trust placed in them.
- Not place themselves in a position where their own interests conflict with their duty to the client.
- Refrain from misusing confidential information for their own advantage or the benefit of a third person without the fully informed consent of the principal.

This list is far from comprehensive, but gives a good indication of the conduct expected of a financial adviser.

Acting in the client's best interest may take many forms, from ensuring that the financial adviser has sufficient information to be able to properly advise the client, through to selecting suitable investments to meet the client's needs, to undertaking transactions. What it demands from the financial adviser is that they conduct themselves in such a way that they put the interests of the client first, and the demands of their firm and their own interests second.

In recent times, major reforms of the financial advice process have been undertaken in many countries to require advisers to prioritise the client's interests when providing advice to retail clients.

1.3 The Investment Advice Process

Learning Objective

7.1.3 Know the factors to consider when providing financial advice: 'Know Your Client' and suitability principles underpinning the fiduciary relationship; the nature of the client relationship, confidentiality, trust and client protection; the information required from clients and methods of obtaining it; information about the firm or adviser; monitoring and review of clients' circumstances; additional requirements needed when advising on unregulated retail products

7.2.1 Know the key stages in investment planning and determining investment objectives and strategy

7.2.3 Know the purposes, merits and limitations of using questionnaires and interviews to elicit client information

7.2.4 Know the main factors, resources and limitations shaping a client's current and desired financial circumstances: gather appropriate, relevant information about current and projected income, expenditure, debt and savings; consider time horizons and the relative balance of growth versus income; distinguish between what is essential and what is desirable, and prioritise accordingly; agree clear, feasible, prioritised investment objectives

1.3.1 Investment Advice Process

The advice process can be divided into a number of distinct stages. A description of the steps involved in the financial planning process is defined by the Financial Planning Standards Board (FPSB), which

describes the process as including at least six steps that form an ongoing cycle as shown in the diagram below.

Financial Planning in Six Steps

Source: Financial Planning Standards Board ltd

In this and the following sections, we will look at:

- Building a relationship with the client and eliciting details of their financial position and requirements.
- Determining the client's risk profile.
- Analysing the client's financial position, assets and cash flow in light of the requirements, and risk profile.
- Formulating an investment strategy to meet the client's objectives that takes into account factors such as time horizon, liquidity, tax and any client constraints.
- Implementing the strategy by selecting suitable products or constructing an investment portfolio.
- If agreed with the client, periodically revisiting the client's objectives and revising the strategy and products held to ensure they continue to meet the client's needs.

1.3.2 Establishing Client Relationships

The first phase of the financial planning process is for the adviser to establish a relationship with the client. This involves:

- Identifying the needs of the client and determining whether these fall within the range of services offered by the firm and whether the adviser has the necessary skills, competencies, and authorisation.

- Explaining the services that the firm can offer and an outline of the process, as well as the required regulatory disclosures.
- Determining whether the firm can meet the needs of the client and, if so, whether advice from other professionals (such as lawyers or tax experts) is required.

The role of the adviser is to build a relationship with a client that allows them in a structured way to identify the information needed to provide sound advice and guide the client through the choices that face them. Key to this process is the communication ability of the adviser. Most financial firms spend significant amounts of time and money on training their advisers in communication techniques. Techniques that need to be honed include:

- Establishing rapport with the client.
- Making clear early on what the purpose of a meeting is.
- Explaining that the information collection exercise is to ensure the quality of the advice that will be given.
- Using a mixture of open and closed questions to establish the information needed.
- Using everyday terminology and explaining jargon when it has to be used.
- Checking understanding.
- Establishing the priorities and getting the client to confirm their agreement
- Guiding and controlling the pace of the interview.

It is also about listening – the best financial advisers are the ones who listen to what the client wants, establish rapport with the client and then mutually agree what needs to be done.

1.3.3 Know Your Client (KYC)

Individuals have varying objectives and expectations. Therefore, before advising the client, an adviser must be aware of these various needs, preferences, expectations and the financial situation of the client.

The adviser must 'know' the client before being able to provide appropriate advice. Indeed, regulators make this an essential requirement in many countries – the 'know your customer' (KYC) process.

Gathering all of the information needed to be able to properly advise a client is often a time-consuming affair and clients often do not appreciate why so much information is needed or why so much time needs to be spent. This requires the adviser to build rapport with the client so that they will feel confident about expressing their personal needs and concerns, in order to establish all of the facts that are needed for the adviser to be able to make a suitable recommendation.

Firms will usually adopt a structured approach to collecting client information; having a structured investment advice process helps a wealth management firm to bring consistency to their advice process. Firms may use any of the following methods or combination of methods to complete the fact find:

- an electronic system
- printed questionnaires
- forms
- meetings
- telephone conversations, or
- email or postal correspondence.

It is highly unlikely that a single questionnaire will ever be detailed and flexible enough to capture every piece of information required. The adviser needs to review the answers given in the questionnaire and ask supplementary questions to understand fully the client's needs, which most people are usually unable to articulate with total clarity via a questionnaire.

The fact-find process will need to go beyond just hard facts, but also elicit views and opinions from the client – this will allow the adviser to assess the level of risk they are comfortable with and the extent to which family values such as ethical or religious beliefs will affect investment decisions. The fact find is crucial to the investment advice process, so many firms use electronic ways of collecting client information and risk attitude to improve the quality and consistency of the firm's advice process.

1.3.4 Client Information

The purpose of gathering information about the client is so that financial plans can be devised, and appropriate recommendations made.

The information that the fact find will aim to collect will depend on the service and products under consideration, but will generally include:

- Personal details.
- Health status.
- Details of family and dependants.
- Details of occupation, earnings and other income sources of wealth.
- Estimates of present and anticipated outgoings.
- Assets and liabilities.
- Any pension arrangements and any life or insurance arrangements.
- Potential inheritances and any estate planning arrangements.

We will now look at each of these in more detail and identify what information is needed and why, when undertaking investment planning.

Personal Details

An adviser will seek to establish extensive personal details about the client as shown in the table below.

Name and address	• Details of the client's name and address will need to be verified to comply with AML requirements by inspecting photo ID and original documents that prove their address, such as a utility bill.
Date of birth	• The client's date of birth will clearly establish their age, and this should immediately start to indicate the stage of life they have reached, which may have implications for any asset allocation strategy – eg, as clients grow older, they are generally less willing to take capital risks, because they cannot easily replace any money they lose through earnings (if at all). • The client's age will also give an indication of their potential viewpoint on long-term investments. • The client's age may also be relevant when looking at their assets. It may influence consideration of whether assets are sold and capital gains tax (CGT) incurred or whether **estate taxes** have an impact on the sale or retention of certain assets.

Residency and domicile	• The client's place of birth may have a bearing on their residency and domicile. The adviser needs to establish whether the client is resident or not in their country for tax purposes and their domicile. If the client maintains that they are not resident or domiciled, what evidence is available to substantiate this if challenged by the tax authorities. • Both of these factors could have a significant bearing on how the returns from any recommended investments are taxed and, therefore, on which are selected, and the net returns that are generated for the client.
Tax ID numbers	• Tax ID numbers will also be needed, as they may be required for any tax wrappers that may be selected and for any tax- reporting requirements that may have to be met.

Health Status

A client's health status will need to be established; namely, whether they are in good health or have any serious medical conditions that may influence their investment objectives and attitude to risk.

An individual in good health who comes from a family with members who traditionally live until a very old age will certainly want to plan for the long term, and planning for income well into retirement may well be very high on their list of priorities. This may influence the investment strategy selected as there may be a need to generate a growing level of income for many years, implying the need for higher exposure to equities and the growing dividend stream these can provide.

At the other end of the spectrum, a client may be in poor health, and this may drive an investment strategy to produce a more immediate income. This will then influence the asset allocation strategy adopted, and sway weightings away from equities to cash and fixed-income instruments.

A client's health may also influence their attitude to risk. A client in good health who expects to live well into old age may take the view that they need to be cautious in their approach or, alternatively, that they have the time horizon that enables an adventurous approach. A client in poor health may take the view that ensuring they have the funds to care for themselves is their overriding priority and so may not be prepared to take undue risks. Equally, a client might take the view that they are going to spend everything they have before they go and so being adventurous is right for them. In that example, shorter-term goals demand quite different advice to long-term needs. You may need to determine and document if your client is insistent on pursuing a short-term, high-risk strategy.

Details of Family and Dependants

Details of the client's family and dependants will normally be established as part of the fact-finding exercise. The information that will be collected will include:

- The name and date of birth of the client's spouse or civil partner, as well as their health status, as this may equally impact the client's investment objectives and attitude to risk.
- The spouse's attitude to risk if this might be a factor in investment selection.
- The extent of any ongoing divorce payments that might be relevant to the investment strategy.

- Details of children or other dependants should also be established, especially if there may be a need to provide funds for school fees, university education or weddings.

Details of Occupation, Earnings and Other Income Sources

The fact find will seek to establish details of the client's business and occupation, and the income that they earn from this and other sources.

- It will be necessary to establish a client's income and the sources it arises from. While generating a particular level of income may be important to the client (even if it is not), it will be equally relevant as to how that income affects the client's tax position.
- The client's occupation or business will give a good indication of their experience in business matters, which may be relevant when judging the suitability of a particular type of investment that carries greater risk.
- Whether the client holds a senior position in a company, so faces restrictions on dealing in the company's shares. To avoid the risk of dealing with inside information, arrangements need to be put in place to request permission to trade, avoid closed dealing periods and ensure that any trading takes place in a manner that places neither the firm nor the client at risk.
- Where a client may be a politician or hold a senior position which is in the public spotlight, they may need to distance themselves from any investment decision-making so that there can be no accusation of them exploiting their position or knowledge. In such cases, it is often common to establish a blind trust where all investment decisions are taken on a totally discretionary basis and where the client is deliberately kept unaware of trading decisions or their rationale.
- Where the client is in business, the adviser will want to understand the client's plans for the business and any funds that may be forthcoming immediately or in the future that might affect the investment plans that the adviser will draw up.

Estimates of Present and Anticipated Outgoings

An understanding of the client's outgoings will be needed in conjunction with their income, where it is necessary to look at budgeting, planning to meet certain liabilities or generating a specific income return.

Depending upon the client's priorities, both their present and anticipated future outgoings may be needed, for example, where the investment plan involves generating a certain income in retirement.

Standard practice is for customers to have some sort of reserve funds in case of volatility soon after investing. The general rule of thumb is that advisers should consider six months' worth of expenses held by the client in reserves to avoid any short-term calls on the portfolio. The adviser should satisfy themselves that, whatever amount is agreed with the client, it is suitable and commensurate with their personal circumstances.

Assets and Liabilities

Full details of the client's existing assets and liabilities will need to be ascertained. As well as obtaining details of the client's assets, the adviser should also look to establish:

- the location of the assets and whether any investments are held in a nominee account
- the tax treatment of each of the assets
- whether any investments are held in a tax wrapper

- acquisition costs for any quoted investments held and any present year gains or losses incurred, and
- details of any early encashment penalties.

The information needed will vary by type of asset; the following table gives an indication of some of what is needed.

Asset	Information needed
Bank and savings accounts	• Account type and details • Balance • Branch where account is held, if needed • Interest rate on the account • When interest is paid and whether there are any bonuses payable • Any early encashment penalties or lock-in periods
Quoted investments	• Full title of each instrument • Nominal amount of stock or shares held • Dates of purchase • Acquisition costs • Where the stock is held and, where known, the ISIN or other identification number • Details of any pending corporate actions
Investment funds	• Full title of each fund • Number of units or shares held • Dates of purchase • Acquisition costs • Share class • Investment structure, fund type and tax status • Whether the holding is **certificated** or uncertificated and in what name it is registered • Any exit fees • Frequency of valuation points if fund redemptions are infrequent • Dealing and notice periods, eg, some illiquid assets, such as hedge funds and private equity funds, have quarterly or yearly dealing
Tax-exempt accounts	• Account type and details • Eligibility criteria for tax exemption • Assets and cash held • Whether further additions can be made in the current tax year • Whether account can be transferred without loss of tax-exempt status • Tax ID reference

Asset	Information needed
Structured products	• Type of product and features • Details of sum payable and any guarantees • Conditions to be met for payment • When purchased and cost • Term and repayment date • Cost structure • Any early encashment penalties • Whether quoted or unquoted
Life assurance bonds	• Policy type and details to include if written in trust or not • Policy conditions • Whether it is with-profits or unit-linked • Details of unit-linked funds and number of units held • When purchased and costs • Any encashment penalties

Pension Arrangements

The pension arrangements that the client has made will need to be closely linked to the investment strategy that is adopted both for retirement and other financial objectives.

The availability of tax exemptions for pension contributions may be an influencing factor on the choice of investments and so clearly needs to be factored in at this stage.

Where the client has some influence over where the funds are invested, the adviser will want to discuss with the client about how the funds will be managed and whether they will be incorporated into any overall asset allocation.

The firm may be able to manage the investments held within the client's pension plan, and in so doing, will need to decide whether that portfolio will be managed as a discrete entity or whether a holistic view will be taken. This could involve the pension plan portfolio being treated as a sub-portfolio for investment management purposes, with the investment manager looking at the combined picture of a taxable portfolio, tax-free accounts and pension portfolios and allocating investments between the accounts.

Potential Inheritances and any Estate Planning Arrangements

Finally, the client should be asked to provide details of any potential inheritances they may receive and of any trusts where they are **beneficiaries**. This will be relevant where the amounts due to be inherited might influence the investment strategy adopted.

For example, a client may be due to inherit a substantial sum from elderly parents, in which case they may be able to take a view that their investments should be directed to outright growth. That said, it is generally unwise to rely on inheritances in the planning process, as they are not guaranteed. Caution is particularly relevant when the anticipation of an inheritance might influence the chosen investment approach.

The adviser should also check whether the client has left any specific gifts of shares in their will and, if so, whether this would prevent any sale of such a holding.

Prioritisation Process

The facts that will be gathered during the fact find will identify those factors that influence the client's needs. Simply because a need has been established, however, does not mean that it can be addressed. Affordability will be a major constraint on a client's ability to invest and protect against all of the risks that might arise. The adviser will, therefore, need to guide the client through a planning and prioritisation process.

1.3.5 Client's Goals and Objectives

This stage of the planning process involves the adviser identifying the client's personal information and financial objectives, needs and priorities, so that they can subsequently analyse the client's financial position and identify suitable solutions. It also potentially involves helping the client to clarify and prioritise their short- and long-term objectives, including discussing with the client the feasibility of any objectives that appear to be unrealistic.

This phase encompasses three main areas:

- agreeing the client's investment and financial objectives and identifying any constraints
- establishing the clients risk profile, and
- collecting the quantitative and qualitative data needed.

Although this is in a logical sequence, in practice, an adviser often ends up moving between the phases and returning to previous ones as new information becomes available.

Understanding the client's goals and expectations is vital to the investment advice process.

Finding out what clients want to achieve with their finances can be one of the longest and most difficult aspects of the investment advice process. Some clients have a good understanding of their general aims and objectives, but many have not thought through them, and so it may be important to help them to consider these issues. In many cases, these are defined during, and as a result of, the process.

An experienced adviser often sets out to determine a client's goals and expectations at the outset, rather than embarking on a detailed fact find. The financial planning experience may well be the first time that a client has thought seriously about their long-term future or tested their aspirations and assumptions against financial realities.

A fact-find process is essential, but clients often see it as having nothing to do with what they want to achieve. A more successful strategy is usually to determine their goals and expectations, and then explain that a detailed fact find will be necessary in order to be able to make recommendations.

Understanding a client's background is important, as a person's history can play a dominant role in shaping individual attitudes. Most individuals' attitudes and beliefs about money are shaped by their experiences

and the challenges that they have faced in achieving a sense of financial well-being. Understanding this helps with clarifying their attitudes to money and managing it and contributes to establishing their tolerance to risk.

Equally, questioning a client about how satisfied they are with their life and financial position can be illuminating and can add further to the background picture of the client. Satisfaction is personal and dependent on an individual's beliefs, and so the results may indicate key priorities that need to be addressed or the degree to which investments need to be targeted at income production, wealth preservation or wealth creation.

An adviser should also try to elicit what principles matter to a client. They may have strong views about where their money should, or should not be, invested, or the level of risk they are prepared to take to achieve objectives. Their attitude to money, and principles and values which matter to them, will help the adviser understand what influences them, and this can be factored into recommendations.

It is also important to understand the stage of life that a client has reached. This may seem as obvious as finding out someone's age and making assumptions from that. Open questions about the client's intentions are likely to bring out useful information about their plans and the challenges they face.

Finally, these conversations lead nicely on to the client's goals and aspirations. Questions designed to find out what their plans are, what they hope to achieve and the lifestyle they want will all help ensure that any recommendations are aligned with these.

Establishing goals and expectations in this way will help the adviser with the fact-find process, which must follow if investment recommendations are to be made.

1.4 Other Key Financial Planning Considerations

1.4.1 Information Disclosure

Financial services firms are required to make certain disclosures to clients at the start of the relationship. In addition, they must provide the client with information about the firm and the scope of the services that are offered, how it manages and safeguards investments, and the costs and charges that the client will incur.

The purpose of this duty to disclose material information is to ensure that the client has all the information needed to ensure that they are in a position to make a full and informed decision about the suitability of the recommendations being made. What constitutes 'material information' will depend upon the investments and products being recommended, but would include areas such as charges, cancellation rights, early encashment penalties, risk warnings and any special or non-standard terms.

Where the firm will be providing ongoing services, it should provide details about how it will go about managing the client's money and the arrangements it will put in place for safeguarding the client's assets.

1.4.2 Unregulated Retail Products

What is included in the term 'unregulated financial markets and products' varies from country to country, so what may be unregulated in some countries may be regulated in others. One example is cryptocurrency, which is banned in certain countries and accepted in others.

Possibly, the key point for advisers is to ensure that full disclosure is made to the client that the product is unregulated and may, therefore, not be protected by any regulatory oversight or have the benefit of any investor protection schemes. A further consideration is that any advice may fall foul of a country's regulatory principles, so the firm may face disciplinary action if the advice proves to not be successful and the client complains.

2. Risk Profile

Learning Objective

7.4.1 Know how to assess a client's risk tolerance, capacity for loss, investment experience and the impact of these factors on the selection of suitable investment products

7.4.2 Be able to analyse a profile of a client's risk exposure and appetite for risk, based on the following objective and subjective factors: level of wealth; timescale; commitments; lifecycle; life goals; investment objectives; attitudes; experiences; knowledge; capacity for loss

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Investment always involves a trade-off between risk and return. However, different people are prepared to tolerate different levels of investment risk, and investment risk means different things to different investors. Variations in attitude arise because of individual differences in circumstances, experiences and psychological make-up.

A client's risk profile is made up of three components:

1. **Risk tolerance** – this is the client's willingness to accept a certain level of fluctuation in the value of their investments without feeling an immediate need to sell.
2. **Risk perception** – this represents their personal opinion on the risks associated with making an investment based on their prior knowledge and experience.
3. **Risk capacity** – this is the client's ability to absorb any financial losses that might arise from making a particular investment.

Taken together, these three elements – along with relevant additional fact-find information – should allow a risk classification or profile to be determined that can be agreed with the client.

The risk assessment process usually starts with an investigation of attitudes; consideration of risk capacity usually follows later since it requires knowledge of the client's objectives and the particular investments that are being considered.

Notably, people can have more than one attitude to risk at any given time. This is because they often have multiple pots of money earmarked for different purposes (eg, retirement, education funds,

emergency savings or discretionary spending), each of which may have a different investment horizon and objective. For example, a client may have a conservative attitude towards risk when it comes to their retirement savings, preferring stable and low-risk investments to ensure the security of their nest egg, but a more aggressive attitude with a separate pot earmarked for discretionary spending.

Attitudes toward risk can also vary over time due to changes in circumstances, experiences and financial goals. Factors such as life stage, financial objectives and market conditions can influence these shifts in attitude.

2.1 Components of Risk

2.1.1 Risk Tolerance

Risk tolerance is defined as the degree of uncertainty that an investor can handle, with regard to a negative change in the value of their portfolio.

It reflects the extent to which an investor is comfortable with the risk of losing money on an investment. If they are unwilling to take the chance that an investment might drop in price, they have little or no risk tolerance. On the other hand, if they are willing to take some risk by making investments that fluctuate in value, they have greater risk tolerance. The probable consequence of limiting investment risk is that they are vulnerable to inflation risk, or loss of buying power.

There are a number of objective and subjective factors that can be established, which will help define this.

Objective and Subjective Factors	
Objective factors	• These factors are quantifiable elements that can influence a client's financial situation and risk tolerance. • The timescale over which a client may be able to invest will determine both what products are suitable and what risk can be adopted. • Family commitments are likely to have a significant impact on a client's risk profile as they will want to meet their obligations. This may make higher-risk investments less suitable. • Wealth is an important influence on the risk that can be assumed. A client with few assets can little afford to lose them, while ones whose immediate financial priorities are covered may be able to accept greater risk. • The stage of life is equally important as it will impact the level of risk that can be adopted and the time horizon over which they consider investments. • The age of the client will often be used in conjunction with the above factors to determine acceptable levels of risk.

Objective and Subjective Factors	
Subjective factors ('soft facts')	• These factors are about attitudes that may influence a client's attitude to risk. • Some individuals have a psychological make-up that enables them to take risks more freely than others, and see such risks as an opportunity. • A client's preferred investment choice such as a client's normal preferences for the relative safety of a bank account versus the potential risk of stocks and shares. • A client's approach to bad decisions. Some clients can take the view that they assessed the opportunity fully and, therefore, any loss is just a cost of investing. Others regret their wrong decisions • and, therefore, avoid similar scenarios in the future.

Establishing objective factors is a preferable and more accurate way to help define a client's risk tolerance, but subjective factors also have a part to play.

Subjective factors enable an adviser to try and establish a client's attitude to taking risks. A client's attitudes and experiences must also play a large part in the decision-making process. A client may well be financially able to invest in higher-risk products and these may well suit their needs. However, if they are cautious by nature, then they may well find the uncertainties of holding volatile investments unsettling, and both the adviser and the client may have to accept that lower-risk investments and returns must be selected.

2.1.2 Risk Perception

Risk perception refers to people's subjective judgments about the likelihood of negative occurrences such as injury, illness, disease and death. In investment terms, risk perception is a subjective view that clients take on the risks involved in making a particular investment, when compared to the alternatives available, based on their own knowledge and experience.

Individuals evaluate risks mostly according to subjective perceptions, intuitive judgments, and inferences made from media coverage and limited information. By contrast, experts try to base their risk perceptions more on research findings and statistical evidence. Risk perception is a highly personal process of decision-making, based on an individual's frame of reference as developed over a lifetime, among many other factors.

Risk is interpreted differently by people. For some, taking on risk is acceptable; while for others, risk is something to avoid. A client may perceive that placing funds in a cash deposit account does not present any risk to the value of their capital. However, this ignores the impact of inflation and, once this has been explained and understood, the client may appreciate that the real value of their capital will diminish over time, if the rate of return they receive on their savings does not exceed the current rate of inflation.

As the client's practical experience of investing increases, this is likely to shape their perception of risk when considering future investment opportunities. Advisers need to be aware that this will happen and, without being patronising, help the client deepen their understanding to whatever extent they wish.

2.1.3 Risk Capacity

Risk capacity is the client's ability to absorb any losses that may arise from making a particular investment.

Risk tolerance and risk perception are partly subjective, but risk capacity is largely a matter of fact. While subjective factors largely determine risk perception and attitude, the key question in assessing risk capacity is more about what would be the consequences for the client if losses were incurred.

In some cases, risk capacity will play the most important role in determining the client's overall risk profile. The client's capacity for risk will also be affected by the level of investment being considered: if the amount at risk represents a significant portion of the overall portfolio, then risk capacity may be diminished. Risk capacity will be greater when the amount at risk is a small fraction of available capital.

2.2 Risk Descriptions

There are a number of approaches that can be taken to establish the client's risk profile, as shown below.

Risk-Profiling Tools	
Risk descriptions	• A much-used approach to establishing a client's risk profile is to describe different types of investment attitudes to find out which is closest to the client's view. • This has the advantage of simplicity. • Its drawback is that statements such as 'medium risk' or 'on a scale of 1 to 10' mean different things to different people.
Psychometric risk profiling	• The aim of psychometric risk profiling is to assess the client's psychological risk tolerance or preference, rather than their objective financial capacity to take risks. • It uses a questionnaire to generate a risk score that can be compared to other clients. • Its advantage is that it allows clients to consider their attitude to investment decisions very carefully and to articulate them to the adviser, who can ask further questions and discuss the relationship of risk to the behaviour of different asset classes. • On the other hand, one limitation is that it may not always capture changes in clients' attitudes over time, leading to potential mismatches between their stated risk tolerance and their actual risk capacity or willingness. • It is important to remember though that the psychological profile is only one of the inputs into the investment decision-making process. But it is a good starting point to a discussion that could include the impact of the profile on potential outcomes for the client's different goals.

Risk-Profiling Tools	
Stochastic modelling	• The stochastic model forecasts a range of possible returns from different portfolios of investments. It helps clients choose the appropriate portfolio by showing the range of possible outcomes from each portfolio and the probability of achieving them. • Its advantage is that it helps to explain investment risk to the client, compare alternative strategies and recommend a portfolio of suitable investments. • It is important to remember though that the psychological profile is only one of the inputs into the investment decision-making process. It is a good starting point to a discussion, though, that could include the impact of the profile on potential outcomes for the client's different goals. • It is important to understand that the model is making predictions about the future and is, therefore, reliant on its assumptions. A further drawback is that some clients may think these projections are set in stone.

Tools can usefully aid discussions with clients by helping to provide structure and promote consistency. However, they often have limitations, which means there are circumstances in which they may produce flawed results. Where firms rely on tools, they need to ensure that they are actively mitigating any limitations through ensuring suitability and the KYC process.

The output of risk profiling is a description of investor risk appetites. Examples of these appetites are shown in the table below. These descriptions are intended to be only illustrative and bring out common traits, as every individual is different.

Investor Risk Appetites	
Low Risk	• Prefer knowing that their capital is safe, and they are not comfortable investing in equities. They would rather keep their money in the bank and are unlikely to have much experience of other investments. • They will usually suffer from severe regret if their decisions turn out badly. • Investors need to understand that their caution can mean that their investments may not keep pace with inflation or that they may fall short of their investment goal. • Investors typically have portfolios with a majority of bonds and cash, with little exposure to equities or other higher risk investments.
Low-Mid Risk	• Prefer not to take risks with their investments, but they can be persuaded to do so to a limited extent. They would prefer to keep their money in the bank, but they may realise that other investments might be better over the long term. • They can often suffer regret when decisions turn out badly. • Investors typically have portfolios with a majority of bonds and cash, but with some exposure to equities and other higher-risk investments.

Investor Risk Appetites	
Mid Risk	• Understand that they have to take investment risk to meet their long-term goals. They are often more willing to take risks with at least part of their available assets and may have some experience of investment, including investing in products containing higher-risk assets such as equities and bonds. • They can usually make up their minds on financial matters relatively quickly, but they still suffer from some feelings of regret when their decisions turn out badly. • Investors typically have portfolios with a mix of higher-risk investments, such as equities and lower-risk investments such as bonds and cash.
Mid-High Risk	• Willing to take on investment risk and understand the nature of the long-term risk/return trade off. They are willing to take risk with most of their available assets, are typically experienced investors and have used a range of investment products in the past. • They will usually be able to make up their minds on financial matters quite quickly. While they can suffer from regret when their decisions turn out badly, they can accept that occasional poor outcomes are a necessary part of long-term investment. • Investors typically have portfolios with a majority of higher risk investments such as equities, but that also contain bonds and cash.
High Risk	• Want the highest possible return on their capital and are willing to take considerable amounts of risk to achieve this. • They are usually willing to take risks with all of their available assets, and have substantial amounts of investment experience. • High-risk investors have firm investment views and will make up their minds on financial matters quickly. They do not suffer from regret to any great extent and can accept occasional poor outcomes without much difficulty. • Investors typically have portfolios made up primarily of higher-risk investments such as equities, with little in bonds and cash.

The results of risk profiling should support the KYC process and form a basis for discussion between the adviser and client as to the types of investments that such a risk profile would suggest are suitable.

3. Investment Objectives and Strategy

Learning Objective

7.2.2 Know how investment strategy and product selection are influenced by: ethical preferences; liquidity requirements; time horizons and stage of life; tax status

Having collected all of the core information needed about the client, the adviser can then turn to agreeing their investment objectives. In collecting the information above, the adviser will have started to build a picture of the client's needs, and will classify these needs along the lines of the following:

- Maximising future growth.
- Protecting the real value of capital.
- Generating an essential level of income.
- Protecting against (provision for) future events.

The adviser will want to convert this into an understandable investment objective. The purpose of this is so that there can be a common understanding of what the client is trying to achieve. The adviser may not personally manage the client's investment portfolio, so there is a need to have common terms of reference so that any investment decisions are suitable for what the client is aiming to achieve. The adviser will, therefore, want to ensure that the client understands the terminology being used and agrees that the correct investment objective has been selected.

The typical investment objectives and definitions are as follows:

- **Income** – the client is seeking a higher level of current income at the expense of potential future growth of capital.
- **Income and growth** – the client needs a certain amount of current income, but also wants to invest to achieve potential future growth in income and capital.
- **Growth** – the client is not seeking any particular level of income and their primary objective is capital appreciation.
- **Outright growth** – the client is seeking maximum return through a broad range of investment strategies, which generally involve a high level of risk.

Once the client's investment objectives have been agreed, the adviser needs to look at developing an investment strategy that can be used to achieve these objectives. In developing an investment strategy, the adviser will need to take into account the following:

- risk profile
- investment preferences
- liquidity requirements
- time horizons, and
- tax status.

3.1 Risk Profile

As we saw in section 2.1, a client's risk profile is made up of a combination of attitudes and risk capacity – that is, the client's ability to absorb any financial losses that might arise from making a particular investment. These allow a risk classification or profile to be determined that can be agreed with the client.

Volatility in the prices of investments or the overall value of an investment portfolio is inevitable. At a personal level, this translates into the risk that prices may be depressed at the time when an investor needs funds and will mean that they will not achieve their investment goals.

A client needs to have a very clear understanding of their tolerance to risk as it is essential to choosing the 'right' investment objectives. Risk tolerance is a very personal subject and is very dependent upon the emotional make-up of a person. It is also objective in that age and health, among other circumstances, will affect how much risk a client can assume – see section 1.3.4.

3.2 Investment Preferences

An adviser will also need to establish whether the client has any specific investment preferences that need to be considered within the investment strategy. These preferences may take the form of restrictions or a requirement to follow a particular investment theme.

Some investors may wish to impose restrictions on what should be bought and sold within their portfolio. For example, they may impose a restriction that a holding cannot be disposed of, or they may prefer to exclude certain investment sectors from their portfolios (eg, armaments).

Alternatively, a client may want to concentrate solely on a particular investment theme, such as ethical, responsible and sustainable investment, or they may require the portfolio to be constructed in accordance with Islamic principles. Ethical, sustainable and responsible investing is covered in chapter 6, section 2.2; and Islamic finance in section 4.5 of this chapter.

3.3 Liquidity Requirements and Time Horizons

It is also essential to understand a client's liquidity requirements and the time horizons over which they can invest, as these will also have an impact on the selection and construction of any investments.

Liquidity Requirements and Time Horizons	
Liquidity	• Liquidity refers to the amount of funds a client might need both in the short and long term. • When constructing an investment portfolio, it is essential that an emergency cash reserve is put to one side which the client can access without having to disturb longer-term investments. • If there are known liabilities that may arise in future years, consideration should also be given as to how funds will be realised at that time.

Liquidity Requirements and Time Horizons	
Liquidity	• Consideration needs to be given as to whether it is sensible to plan on realising profits from equities as market conditions may be such as to require losses to be established unnecessarily. • Instead, conservative standards suggest investing an appropriate amount in bonds that are due to mature near the time needed, so that there is certainty of the availability of funds.
Time Horizon	• Time horizon refers to the period over which a client can consider investing their funds. • Definitions of time horizons vary, but short term is usually considered to be up to five years, medium term from five to ten years, and long term to be ten years or more. • Time horizon is very relevant when selecting the types of investment that may be suitable for a client. • It is generally stated that an investor should only invest in equities if they can do so for a minimum period of five years. This is to make the point that growth from equities comes about from long-term investment and the need to have the time perspective that can allow an investor to ride out periods of market volatility.

The lower the client's liquidity requirements and the longer their timescale, the greater will be the choice of assets available to meet the client's investment objective.

The need for high liquidity allied to a short timescale, demands that the client should invest in lower-risk assets such as cash and short-dated bonds, which offer a potentially lower return than equities. If the opposite is true, then the portfolio can be more proportionately weighted towards equities and other high-risk investments.

Whatever their requirements, however, it is important that the client maintains sufficient liquidity to meet both known commitments and possible contingencies.

3.4 Tax Status

The tax status of the client, and the taxes to which any investment income or gains, will be subject may have a major impact on the investment strategy that is adopted.

The adviser will, therefore, need to establish:

- The client's residency and domicile position.
- The client's income tax position.
- How tax will affect any investment income.
- Any tax allowances which can be utilised.
- How tax will affect any gains or losses made.
- Eligibility for any tax-free accounts.
- Opportunities for deferring any tax due.

An adviser must establish the client's residence and domicile status, as well as whether any other jurisdictions are relevant to the client from a tax point of view and should also be considered. All these may affect how any investments are structured. Although tax rules vary from country to country, establishing the client's tax position is essential so that their investments can be organised in a way that attracts the least tax possible on returns. This requires the adviser to be aware of what taxes may affect the client, such as taxes on any income arising or on any capital gains, how these taxes are calculated, and what allowances may be available. It should also be remembered that tax legislation is constantly being reviewed and updated; therefore, future charges to taxation rules may render a tax-planning strategy ineffective.

Advisers also need to take care that any tax avoidance measures will stand up to scrutiny given the increasing public disquiet regarding tax avoidance measures by companies and wealthy individuals.

Tax Avoidance vs Tax Evasion

- Tax avoidance involves taking steps to reduce the amount of tax that someone pays within the law whilst making full disclosure of material information to the tax authorities.
- Tax evasion is the attempt by individuals and companies to evade paying tax by illegal means.

Public perception of what is acceptable tax avoidance has led to this being more carefully defined. The term 'tax mitigation' is used to refer to acceptable tax planning – it refers to ways of minimising tax liabilities in ways that are expressly endorsed by tax legislation. By contrast, tax avoidance flouts the spirit of the law and is, therefore, thought by some to be unacceptable, albeit not criminal in the way that evasion is.

3.5 Considerations for Other Types of Client

Learning Objective

7.4.3 Know the main considerations for investing in accordance with Shariah law and other faith values, and those that should be taken into account when investing for charities and trusts

In the previous sections, we have looked at the factors that should be considered when undertaking a structured investment advice process for wealthy individuals. Wealth managers will also need to take account of additional factors when dealing with trusts and charities, and when they need to take account of the ethical and religious beliefs of clients.

Islamic Finance

Islam sets out specific requirements in Islamic law (Shariah) with regard to investment. To support their communities who follow these practices, a number of Islamic banks have become established worldwide, while at the same time, conventional banks now provide a wider range of products and services that comply with these laws.

Islamic finance refers to a system of banking or banking activity that is consistent with the principles of Islamic law and its practical application through the development of Islamic economics.

Shariah prohibits the payment of fees for the renting of money (*riba*, or usury) for specific terms, as well as investing in businesses that provide goods or services considered contrary to its principles (*haraam*, or forbidden).

The overarching principle of Islamic finance is that all forms of interest are forbidden. The Islamic financial model works on the basis of risk sharing. The customer and the bank share the risk of any investment on agreed terms, and divide any profits between them.

The main categories within Islamic finance are:

- **Ijara** – is a leasing agreement whereby the bank buys an item for a customer and then leases it back over a specific period.
- **Ijara-wa-Iqtina** – is a similar arrangement, except that the customer is able to buy the item at the end of the contract.
- **Mudaraba** – offers specialist investment by a financial expert in which the bank and the customer share any profits. Customers risk losing their money if the investment is unsuccessful, although the bank will not charge a handling fee unless it turns a profit.
- **Murabaha** – is a form of credit which enables customers to make a purchase without having to take out an interest-bearing loan. The bank buys an item and then sells it on to the customer on a deferred basis.
- **Musharaka** – is an investment partnership in which profit-sharing terms are agreed in advance, and losses are pegged to the amount invested.

Faith-Based Values

Responsible, sustainable and ethical investing was founded on religious roots. In the 1800s, the Quakers (who were anti-slavery and anti-war) avoided investing in weapons production.

Today, faith-based investing is often a combination of socially responsible investing, plus the screening out of several other things germane to a particular religion. Each group decides both what their financial goals are and their strategies to achieve those goals. They also look at their social and religious teachings and that leads them to be willing to hold certain things in their portfolios.

Almost every religious denomination in the world has views and opinions which may impact how they wish to invest, so they may favour certain causes, while at the same time avoiding those that contradict their values. When it comes to religious-based rules, there are a wide variety of interpretations based on their teachings.

There are many more belief systems than it would be possible to cover within this text and they can vary significantly between regions, denominations and individuals. In many cases, political and societal factors will have a huge impact on shaping the key values for an individual; therefore, candidates are encouraged to carry out their own additional research should they wish to find out further information concerning specific belief systems.

Trusts

Trusts are a legal arrangement whereby assets are placed under the control of **trustees** for the benefit of certain named beneficiaries or for a specified purpose and are covered in more detail in chapter 8.

Portfolio managers regularly manage portfolios on behalf of trusts and a different set of considerations and obligations arise when doing so. Trusts are widely used to control the ownership of assets and to mitigate tax liabilities. In managing the investments of a trust, it is essential to understand their various forms, operation and relevant rules.

In order to carry out their obligations under the trusts, trustees have a range of powers and duties that are conferred by either the trust deed or statute. Within a trust, there will always be assets or investments of various kinds and therefore the trustees need powers to invest, as otherwise they would be liable for any loss.

Charities

Many charities have surplus funds not needed to fund their immediate charitable activities; often the charity invests some or the entire surplus in order to generate extra income to fund future activities. In advising charities, the process of determining their investment objectives, risk profile and the investment strategy to be followed applies equally to them as to the other types of clients.

The charity will be run by a board of trustees, if established as a trust, or by a council, if it is a foundation. The trustees or the council will have responsibility for the management of the charity's funds.

The basic principle governing decisions about investing their charity's funds is that they must take a prudent approach. When investing charitable funds (especially those which represent permanent endowment), the charity must seek to strike the right balance for their particular charity between the two objectives of:

- providing an income to help the charity carry out its purposes effectively in the short term, and
- maintaining (and, if possible, enhancing) the value of the invested funds, to enable the charity to carry out its purposes in the longer term effectively.

In order to discharge the duty to adopt a prudent approach to the investment of the charity's funds, the trustees or council members of the charity must:

- Know their investment powers.
- Discharge their duties properly when they take decisions about investments.
- Have proper arrangements in place for holding investments on behalf of the charity.
- Follow certain legal requirements if they are going to use an institution to manage the charity's investments on their behalf.
- Know what they can and cannot do if they are going to apply an ethical approach to the charity's investments.

If the size of the funds to be invested justifies it, trustees should decide on a formal investment policy for the charity. This will vary in the level of detail and complexity depending on the size of the charity, and on whether the function of investment has been delegated.

4. Investment Recommendations

Learning Objective

7.1.4 Know services associated with firms providing: advice; discretionary and advisory management; execution only

7.4.4 Assess affordability and suitability based on a range of factors including product provider quality, performance, risk, charges and client service

7.5.1 Apply a strategy and rationale that will meet the client's objectives: highlight the pertinent issues and priorities; formulate a plan to deal with them; offer proposals to achieve these objectives; explain clearly the relative merits and drawbacks of each proposal and combination thereof; agree a strategy that the client understands and accepts

7.5.2 Apply an appropriate strategy that best meets the following criteria: client's financial objectives and priorities; client's risk tolerance; appropriate fees and charges; portfolio turnover ratio (PTR); client suitability requirements; adequate diversification and correlation benefits; additional risk, timing and liquidity factors where asset accumulation and decumulation are relevant features

7.5.3 Understand the factors which influence the way in which recommendations are presented and understand how to check clients' understanding of recommendations

7.5.4 Assess the factors influencing the choice of benchmark and the basis for review: portfolio's asset allocation; risk/return profile; alternative investments; taxation; peer groups; maintenance of capital value

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After determining a client's objectives and risk profile, the next stage is to collate all of the data that has been collected, analyse the client's financial position, and prioritise the areas where action is needed. This involves turning the data into a comprehensible form that allows it to be readily analysed. This can be broken down into a number of areas such as:

- Net assets statement.
- Cash flow statement.
- Tax analysis.
- Lifetime cash flow projections.

After analysing the client's current financial position and any constraints, the final stage of the investment advice process is the development of solutions that are suitable for the needs of the client.

4.1 Developing a Strategy

Having established what the needs and objectives of the client are, and completed a thorough assessment of their existing financial position, the adviser can assess:

- The affordability and suitability of the client's existing arrangements.
- What the client is aiming to achieve.
- What should the client's priorities be.

It needs to be remembered that financial planning is a long-term process and not a one-off exercise. Most clients will need to prioritise their needs and then deal with the most pressing first; other needs can only be addressed when the constraints of affordability allow.

The development of a strategy will involve the following:

- Assessing where action is needed.
- Prioritising what should be addressed.
- Identifying where action should be left until a later date.
- Developing potential solutions to address the priorities for further investigation.

4.2 Assessing Existing Assets

Having determined a strategy to meet the client's needs, the adviser will then need to check existing assets and products for their suitability. This will involve determining the details of each product, assessing whether they meet the client's needs, and establishing any issues that may arise in moving these to alternative options. There are many factors to consider – this will be driven by the type of asset, product or arrangement. Some items to consider include:

- Their relevance to the true needs of the client.
- Whether they are affordable options.
- The degree of risk associated with the product considered against the client's risk tolerance.
- The extent of any diversification, or lack thereof.
- The liquidity (that is, the ease of selling it or otherwise converting it into cash).
- The level of charges compared to comparable products.
- Whether it is income producing or more suitable for capital growth.
- The tax treatment/efficiency.
- Performance of investments, growth achieved and any taxation treatment on encashment.
- How long any assets need to be retained to earn any bonuses.
- Any encashment penalties.

This analysis will then provide the basis for continuing the financial planning process. It will identify which assets should be retained and which should be disposed of to finance meeting the client's objectives. The next steps are to identify suitable financial products that can meet the client's requirements and evaluating their features.

4.3 Investment Services and Solutions

Whilst the investment policy statement sets out the client's risk and return objectives, it is still necessary to select an investment proposition that is appropriate, suitable and capable of achieving the client's goals.

There are a range of potential investment solutions to choose from that can cater for different types of clients.

4.3.1 Types of Investment Services

Discretionary and Advisory Management

Clients will often have sufficient funds to warrant an investment portfolio being established and managed on their behalf. The management of their portfolio will be conducted on either an advisory or discretionary basis. Both services involve managing a portfolio of investments for a client, the fundamental difference being whether discretion over investment changes is given or not.

- A discretionary management service is where the client gives discretion to the investment firm to manage their investments on their behalf. The portfolio manager manages and makes changes to the portfolio without referring to the client, but within the constraints of the client's investment objectives and the strategy that has been agreed with them.
- An advisory management service is a service offered to clients who do not want to give up decision-making and want to remain actively involved in their portfolio's management. A portfolio manager considers changes to their client's portfolio and explains why certain changes are needed. The client then decides whether or not to accept the advice.

Execution Only

An execution-only purchase or sale is one where no advice is given to the customer, and the firm simply undertakes the transaction. In such cases, the transaction is carried out on the instructions of the customer and no advice is provided about the suitability of the course of action or product.

In such cases, certain regulatory requirements do not usually apply so that, for example, a fact find to establish full details about the customer is not required. If the customer decides on the course of action but then, having been provided with information, asks whether the product or certain features are suitable for them, then this would no longer be execution-only business, and the firm would then need to go through a fact-find (KYC) process.

Even if the transaction is to be conducted on an execution-only basis, though, advisers in some jurisdictions may be expected to provide some form of comment or warning if they believe that the trade that the customer is proposing may be unsuitable. This is particularly important in situations where the adviser has reason to believe that the customer may not fully understand the risks involved, or if they suspect that the customer may be making a decision that is not in their best interest.

4.3.2 Portfolio Solutions

Discretionary and advisory portfolios can take a number of forms including:

- Fund portfolios that are a portfolio of various mutual funds or multi-manager funds. This could include:
  - actively managed funds for clients seeking the potential for higher returns than an agreed benchmark
  - a portfolio of low-cost mutual funds for clients with modest asset levels who require a low-cost ongoing service, or
  - a combination of the two.

- Managed (or model) portfolios, which are standardised portfolios designed around a range of risk profiles that can be matched to a client's profile. They are typically constructed of mutual funds, but may have a mix of direct holdings and funds. All clients in a particular profile receive exactly the same portfolios and, crucially, are traded and adjusted at the same time by the discretionary managers.
- 'Bespoke' portfolio management is the traditional type of service offered by stockbrokers and private client investment management firms. This involves constructing and managing a portfolio around the specific needs of a client. The minimum portfolio size for a bespoke service is quite high and is often banded so that the wealthiest investors receive the highest service levels. Some of the characteristics of bespoke investment management are:
  - The investment mandate is agreed with the client with the scope for increasing levels of customisation for higher amounts.
  - An investment manager will be appointed to manage the portfolio and the client will often have direct access to the investment manager as well as their relationship manager.
  - Both traditional and alternative asset classes will be used and existing assets can be incorporated into the portfolio and large holdings managed separately.
  - Charges will usually be by negotiation and dependent on the level of service provided.
  - Reporting will be sophisticated with detailed performance reporting and analysis.

Bespoke portfolios tend to have the highest levels of personalisation and service, and the difference between the various types that are offered is often down to the entry level for the service. Bespoke portfolio management will often have high minimum investment levels compared to fund portfolios and managed portfolios, which are designed to appeal to a wider audience with relatively smaller amounts to invest.

For clients who want execution-only services, a preferred fund panel may be provided.

4.3.3 Investment Funds

The essential characteristic of this type of investment service is the use of investment funds to access a diversified portfolio of assets. They may use mutual funds or any of the other types of investment fund such as closed-ended funds, absolute return funds or hedge funds. Examples of some general types are shown below.

Return-focused portfolios	• Many investment firms run model portfolios of investment funds that are targeted at different investment objectives such as growth, balanced or income. • These are regularly monitored and adjusted depending on market movements and fund manager changes. The approach is return focused and aims to meet or exceed a benchmark target.

Risk-targeted portfolios	• The concept behind such portfolios is to maximise returns, but only by taking on a certain level of risk within pre-defined volatility bands. Once a client's risk profile has been agreed a model portfolio is selected that is designed to provide and maintain a suitable combination of asset classes and funds that deviate little from the agreed risk parameters. • The fund's aim is to ensure the asset mix within the fund continues to meet the risk profile and does not simply aspire to beat a sector average performance. • As a generalisation, the constraints imposed on risk-targeted funds can make it difficult for the fund to outperform its benchmark and so significant outperformance should not be expected.
Model portfolios	• An investment firm may construct and manage model portfolios of funds itself or outsource the investment activity by using a fund of funds approach or multi-manager solution. • FoFs – assets are invested in other mutual funds to utilise the expertise of specialist managers in each asset class. A FoFs approach can be either fettered which means that it only invests in funds managed by the same group or unfettered where it may invest in any fund and fund management group it chooses. • Manager of manager (MoM) – assets are managed by specialist managers in each asset class on a segregated basis as mandated by the multimanager fund manager. • With multi-manager funds, many funds will invest only in traditional assets, whilst others will adopt a more multi-asset approach, investing in commodities and hedge funds, for example. It is important that advisers understand the component parts of each fund as these could expose investors to different types of risk.

In analysing such services, differentiating factors that should be analysed include whether:

- The approach is return focused or risk targeted.
- It involves management of a portfolio or the use of a fund of funds or multi-manager type solution.
- It uses only traditional asset classes or also includes alternative assets.
- The level of asset and geographic diversification and whether the investment approach is active management, passive management or a blend of the two.
- The portfolio turnover ratio is appropriate. The portfolio turnover ratio is the rate at which assets in a fund are bought and sold by the fund manager. Higher turnover may be appropriate, but implies higher charges to cover the cost of trading.
    - Note that the ratio will depend on the investment type within the fund – eg, a fund of short-dated bonds will have a relatively high ratio, as the bonds mature and redemption proceeds reinvested.
    - Additionally, the ratio can be impacted by the approach – for a core/satellite approach, the 'core' (buy-and-hold) element will have a lower ratio, but the 'satellite' a higher ratio.

4.4 Recommendations

Advisers need to be able to apply a range of criteria when matching investment solutions to client needs. They must recognise that each client has their own views, goals and attitudes. Attitudes to risk vary widely according to their different objectives of the investor. Accordingly, investment choices vary widely too.

Although a comprehensive and detailed formula cannot be delivered for every client, there are a series of steps that an adviser takes, based on the objectives in terms of risk and return, that have been agreed with the client, after taking into account their liquidity, constraints and other needs.

Financial theory has established a linear relationship between risk and return. More simply, as risk taken in investment increases, return has to increase to compensate investors for the additional risk taken. The risk premium required is with the level of risk taken.

Traditionally, in a risk/return space generated by Markowitz, we can visualise the risk axis being split into zones and defined by three major asset classes that are staple products in a conventional mutual fund constructed by a traditional money manager. These zones are defined by money market-like instruments, bond-like instruments and equity-like instruments; and risk increases from money market-like instruments through to equity-like instruments. Alternative funds are contemporary investments that have increased the risk space further and also bring with them diversification opportunities for traditional funds.

The final stage of the process is, therefore, to produce recommendations and a financial plan for presentation to the client. The plan should detail the following:

- Document the client's existing position.
- Identify the areas that require addressing and what the priorities are.
- Detail the recommendations made and the reasons why they are suitable.
- Document the areas where action has been deferred until a later date.

Assuming the recommended solution is to offer ongoing investment services, then an investment policy statement should be prepared and a suitable benchmark selected to monitor the performance of the investment portfolio.

4.4.1 Investment Policy Statement (IPS)

An investment policy statement can be thought of as a summary of a client's investment objectives that captures their required returns, risk profile and any constraints that the investment manager will operate under. It sets these out along with the investment strategy that will be used to achieve the client's goals.

An investment policy statement should be unique to the client, but the following table shows some of the essential factors that should be detailed.

Investment Policy Statement	
Investment Objectives	• The investment objectives should be set out using a standard wording that has been explained and agreed with the client such as capital growth, wealth preservation or income. • This should spell out the goals of the client that are relevant to managing their investments, such as to generate a steady level of growth until retirement. • It should also detail any specific returns that need to be met such as a certain level of after tax income.
Risk Profile	• The client's agreed risk profile should be set out. • It should also expand on their attitudes to risk and their capacity for risk taking. • Views on volatility and drawdown.
Liquidity Requirements	• Any requirements for maintaining a certain level of liquidity. • Any need to invest surplus funds or generate funds to top up the client's emergency cash reserve. • Details of known future liabilities that have to be met from the portfolio.
Time Horizon	• Factors that will affect the time horizon over which the client is investing such as date of retirement.
Tax Position	• Tax position of the client and its impact on investment selection. • Use of any tax wrappers or accounts. • Any considerations that should be applied to establishing taxable capital gains.
Investment Strategy	• The investment solution to be adopted to meet the client's objectives such as investment funds or discretionary investment management.
Asset Allocation	• The IPS should set out all permissible asset classes in which the portfolio may be invested. • A target asset allocation can be set out with the proviso that this may change depending on market factors. • Any constraints on the investment manager's ability to adjust asset allocations.
Constraints	• Any ethical or other constraints that should be followed in construction and management of the investments. • Any restrictions on the inclusion of particular stocks within a portfolio or restrictions on the sale of any holdings.
Benchmark	• The benchmark against which the portfolio performance will be judged.
Any Other Factors	• Any other factors that might influence investment selection and management including items such as inheritances.

4.4.2 Choice of Benchmark

Once the portfolio has been constructed, the portfolio manager and client need to agree on a realistic benchmark against which the performance of the portfolio can be judged. The choice of benchmark will depend on the precise asset split adopted and should be compatible with the risk and expected return profile of the portfolio. If an index is used, this should represent a feasible investment alternative to the portfolio constructed. (See chapter 6 for more on how benchmarking can be used to measure performance.)

4.5 Presenting Recommendations

Providing a written report to clients is an important part of the process of giving financial advice.

A written report provides a way of putting across recommendations that have already been made orally in meetings with clients. The written format makes some aspects of observations and recommendations easier for the client to understand.

Furthermore, providing a written report is clearly an important way of providing a record of what is being recommended, and on what key information it is based. A report in writing should avoid the potential for misunderstandings about the advice that has been given, thus acting as a safeguard for the adviser in justifying their work, as well as a document of record for the client.

The parts of a financial planning report to a client are normally as follows:

- A statement of the client's objectives.
- A summary of the client's income and assets and other relevant circumstances or problems.
- Recommendations, including any proposals for immediate action, as well as longer-term suggestions for the client to consider in the future. These should be backed up by the reasoning behind them – why they are felt to be suitable – and any risks or inflexibilities inherent in the proposed solutions. These recommendations should include timescales for implementation.
- Appendices, including any data that is best presented separately, if appropriate.

Product quotations, illustrations and brochures should be presented in an orderly way, possibly with an index listing the various items being sent to the client. The language in the report should be as concise and clear as possible. The language used should not include jargon, except when necessary to explain points being made.

Following the preparation of a written report, it is often sensible to have a meeting with the client, to give them an opportunity to clear up any misunderstandings that may have arisen with regard to their objectives, and to allow them to ask questions where needed.

4.6 Regulatory Considerations for Recommendations

4.6.1 Suitability Principles

The regulatory steps expected of a firm to ensure its recommendations are suitable and appropriate will vary depending upon the needs and priorities of the customer, the types of investment or service being offered, and the nature of the relationship between the firm and the customer.

4.6.2 Conflicts of Interest

Learning Objective

7.1.6 Know the concept of a 'conflict of interest' and of its significance when giving client advice

A conflict of interest can occur when someone in a fiduciary position has personal or professional interests that compete with their duty to act in the client's best interest. As we saw in section 1.2, acting in the client's best interest requires advisers to not place themselves in a position where their own interests conflict with their duty to the client.

Membership of the CISI requires members to meet standards set out within the Institute's Principles. These Principles impose an obligation on members to act at all times, not only in compliance with the rules, but also to support the underlying values of the Institute. The Principle relating to conflicts of interest is shown below.

CISI Code of Conduct

'Conflict of Interest – being alert to and actively manage fairly and effectively any personal or other conflicts of interest, obeying legislation and complying with regulations to the best of your ability, ensuring you are open and cooperative with all your regulators, challenging and reporting unlawful or unethical behaviour'.

A financial adviser needs to keep in mind their duties to the client and their responsibility to act in the client's best interest. All recommendations should be driven by the customer's needs, and never by the potential to earn commission for the adviser or the firm. Open disclosure of any fees or commissions can aid removal of this conflict. Disclosure of material information becomes more important where the adviser or firm may have an interest in a customer undertaking a transaction. In such situations, there is the potential for a conflict to exist between what is good for the adviser or firm, and what is good for the firm's clients.

Conflicts of interest also arise where a firm is dealing on behalf of a client. The firm may wish to place an order in the same security, and it may have orders from other clients for the same security. In such circumstances, the firm should place the orders in due turn so that it is not giving priority to any particular client, and should refrain from placing its own orders if they may prejudice the client's trade.

Conflicts of Interest Policy Example

In Europe, investment firms are required to have a documented 'conflicts of interest' policy. Firms under these obligations are required to do the following:

- Maintain and apply effective organisational and administrative arrangements designed to prevent conflicts of interest from adversely affecting the interests of their clients.
- Have in place appropriate information controls and barriers to stop information about investment research activities from flowing to the rest of the firm's business.
- Where a specific conflict cannot be managed away, ensure that the general or specific nature of it is disclosed (as appropriate to the circumstances). Note that disclosure should be used only as a last resort.
- Prepare, maintain and implement an effective conflicts policy.
- Provide retail clients and potential retail clients with a description of that policy.
- Keep records of activities where a conflict has arisen.

While removal of a conflict of interest is the best way to resolve potential conflicts of interest, that is not always possible. However, there will be times when it is not possible to avoid conflicts of interest, and the firm or adviser should recognise the need in those circumstances to withdraw from the transaction.

5. Review

Learning Objective

7.5.5 Know the importance of regularly reviewing the client's financial position and the factors that may require changes: changes in client circumstances; changes in the financial environment; new products and services available; administrative changes or difficulties; investment-related changes (eg, credit rating, corporate actions); portfolio rebalancing; benchmark review

As we have seen, financial planning is a cyclical process, and it is the regular reviews of the financial plan that enable this cyclical process.

Ultimately, the objective of each review is to tell the client whether they remain on track to meet their objectives, and, if not, what additional actions may be required. The regular reviews may be an opportunity to consider whether a client's investment portfolio may need to be rebalanced towards a target asset allocation. Regulations require that where an investment firm has an ongoing relationship with the client, it should establish appropriate procedures in order to maintain adequate and updated information about the client.

A financial plan should, generally, be reviewed at least every 12 months, but ad hoc reviews may also be required – for example, if the client experiences a significant change of personal circumstances. A client's plans can change because:

- the environment changes around them, such as changes to tax laws and allowances, or stock market performance is better, or worse, than anticipated, or

- the client's circumstances change or so do their needs, wants and aspirations – eg, the client marries or divorces, retires from full-time employment, inherits a sum of money or has a child. Not only will their financial needs change, but their attitudes to finance may also alter and they may, for example, become more or less risk averse.

Quite small changes in financial behaviour can, together, have a big cumulative effect on a client's finances. By repeating the planning exercise on a regular basis, both adviser and client can see whether they are making progress towards the client's goals, or whether they are drifting off target and need to rebalance or use a little financial discipline. Regulatory requirements sometimes specify the maximum amount of time that should pass between reviews.

The adviser should agree early on whether ongoing monitoring and review is going to fall within their remit – in many cases, this will be so. If so, the adviser should have advised the customer of how frequently they can expect to see an update of the plan and any new recommendations.

Periodic reviews to clients should include the up-to-date value of the client's investments. Investments should be valued on a basis which has already been agreed with the client (eg, when stocks and shares are involved, the valuation process should be consistent as to whether bid or mid prices are used and what exchange rate is used for any foreign assets). It will also generally include a statement showing any transactions undertaken over the period (including any charges that have been deducted, and any additions to or withdrawals from the client's portfolio).

If a full periodic review is being carried out, the adviser should re-verify the client's details and establish whether there have been any changes to their circumstances which might require an amendment to the plan. If this is the case, the adviser should check the new details, and then go through the new recommendations with the client to ensure they understand their implications in full, just as at the outset.

The review should look at a range of factors including:

- Reviewing the previous advice in light of any changes to the client's circumstances and revising recommendations where necessary.
- Changes to goals and objectives and the amounts targeted.
- Reviewing and amending the assumptions used, where relevant, to take account of changing market conditions, investment returns and future inflation rates.
- Net worth, income and expenditure.
- Asset allocation and client risk profiles (including rebalancing portfolios).
- Suitability of products and product wrappers held and revisiting the risk appetite and capacity for loss of the client.
- Obtaining any documentation that may be required in the review meeting.
- Checking existing terms of business documentation and preparing updated documents, where necessary.

In some cases, significant changes to one or more of the above may require that a new financial plan is drafted; in others, the existing plan may be amended and updated. In either case, it is important that the client continues to fully understand how the financial plan works, and how it will help them to meet their objectives.

For financial planning to be effective, it must continually adapt to the circumstances, priorities and aspirations of the client, which are guaranteed to change due to key life events, career changes, increasing age, a growing or diminishing family, changes in health and desires or needs. At each step or point in their life, the client is faced with numerous choices plus some options they may not be aware of. Providing financial advice to a client continues throughout a working life and does not stop even at the point of retirement.

6. Wealth Management Charges

Learning Objective

7.1.5 Know how wealth management services can be paid for: management fees; transaction charges; financial planning advice; performance-based fees; fees dependent on the nature and frequency of service to be provided

The fees charged for wealth management services depend on the nature and frequency of the service being provided. They include fees for providing financial advice, any management fees involved, and fees for managing client portfolios.

Providing financial advice to a client is a time-intensive exercise, so wealth management firms expect to charge appropriately for provision of the advice. Charges can be either commission or fee based. The advice provided by a financial adviser may be paid through the receipt of either an upfront commission and/or commission paid from the product during its lifespan. Often, the latter type is built into investment products and is a percentage of the value of the fund. Alternatively, the provision of advice may be fee-based, where the fee is agreed in advance with the client; or it may be a one-off fee or hourly fee for specialist advice in certain areas.

Types of Charges

Investment products such as life insurance or mutual funds will carry a range of charges that may include:

- An initial charge for investment in the product, or fund-based on a percentage of the amount invested.
- Ongoing charges for managing the underlying investment portfolio along with the costs that arise from trading and administering the portfolio.
- In certain types of funds, performance fees may arise based on the investment performance of the fund.
- Exit charges may also be payable for certain funds or where an early exit from an investment product is permitted.

These charges are normally paid from within the investment itself.

Where a portfolio is managed on behalf of a client, annual management fees will be due. These fees are usually based as a percentage of the portfolio value, spread across the year – for example, if the fee is 1% a year, then 0.25% may be taken each quarter.

Regulatory requirements will typically require firms to disclose to clients the nature of the services being provided and, usually, the content of information that financial advisers must provide to their clients. These obligations usually include the basis on which charges will be paid, any product-related charges and any commissions it may receive from a product provider. Regulations will usually require this disclosure in writing, and before the firm conducts any business for the client.

Fee Disclosure

The information to be supplied typically includes:

- The total price to be paid including all related fees, commissions, charges and expenses, and any taxes payable via the firm.
- If these fees cannot be indicated at the time, then the firm must disclose the basis on which they will be calculated so that the client can verify them.
- The commissions charged should be itemised separately.
- If any costs or charges are payable in a foreign currency, what the currency is and the conversion rates and costs.
- If other costs and taxes not imposed by the firm could be payable, how they will be paid or levied.

7. Taxation

Learning Objective

7.3.1 Know the application of the main business taxes: business tax; transaction tax (eg, stamp duty reserve tax); tax on sales

7.3.2 Know the direct and indirect taxes as they apply to individuals: tax on income; tax on capital gains; estate tax; transaction tax (stamp duty); tax on sales

7.3.3 Know the principles of withholding tax: types of income subject to withholding tax (WHT); relief through double taxation agreements; deducted at source

7.3.4 Know the principles of double taxation relief (DTR)

7.3.5 Know the implications of domicile, residency status and location of assets

The types of tax that an investor will face will vary widely from country to country, with some countries imposing a wide range of taxes on an individual's income and gains, while others may not impose any at all. Governments can also offer companies and individuals various tax concessions and incentives. For example, Shenzhen in China was one of the first special economic zones established by the Chinese government to encourage business development and trade. For individuals, many countries offer tax concessions on pension contributions and pension plans and some permit specialised tax-free savings accounts.

7.1 Business and Sales Taxes

Companies are generally liable to some form of business or corporation tax on their total profits. Total profits include both the profits from their activities and any chargeable gains.

Note that business taxes and corporation taxes are not the same thing. While corporation tax is a specific type of tax imposed on the profits of companies by the government, business tax is a broader term that encompasses various taxes – not only corporation tax but also sales taxes, payroll taxes and property taxes, among others. With effect from 2023, over 130 countries agreed to implement a global minimum tax rate of 15% as per OECD guidelines.

Unlike individuals, who pay tax for a set fiscal year, companies pay tax for what is known as an 'accounting period', which is normally the period covered by the accounts. For tax purposes, the accounting period is usually no longer than 12 months, although there are circumstances where it can be shorter or extended up to 18 months (eg, a company is newly formed or ceases trading).

- An accounting period starts when:
  - a company first becomes chargeable to business or corporation tax, or
  - the previous accounting period ends.

- An accounting period ends when the earliest of the following takes place:
  - the company reaches its accounting date
  - it is 12 months since the start of the accounting period, or
  - the company starts or stops trading.

The rates of business or corporation tax that a company is liable to pay will vary from country to country, and often change each year. Companies submit details of their taxable profit to the tax authorities after the end of the company's accounting period. The authorities review the company tax return to determine how much tax is payable and issue a tax assessment to the company, showing the amount of tax due.

Sales taxes such as goods and services taxes (GST; one form of which is value added tax (VAT)) are forms of indirect taxation that are being increasingly deployed across the world and which are also being applied to an increasing number of items. Indirect taxes are charges levied on consumption or expenditure as opposed to on income. As a result, they are sometimes referred to as consumption taxes. They are a form of regressive taxation because they are not based on the 'ability to pay' principle.

7.2 Financial Transaction Taxes

Financial transaction taxes are imposed by governments on any sale, purchase, transfer or registration of a financial instrument such as shares.

Many G20 countries currently impose some sort of financial transaction tax, and the most common is a tax on the trading of equities in secondary markets. They are generally ad valorem taxes based on the market value of the shares being exchanged, with the tax rate varying between 10 and 50 basis points. For example, the UK charges a tax known as stamp duty reserve tax (SDRT) at a rate of 0.5% on share purchases.

Over the past few decades, the trend in share transaction taxes has been downward – eg, the US eliminated its stock transaction tax as early as 1966; Germany eliminated its stock transaction tax in 1991 and its capital duty in 1992; and Japan eliminated its share transaction tax in 1999. However, financial transaction taxes have become of particular interest to governments following the global financial crisis, when the G20 requested the International Monetary Fund (IMF) to find ways of ensuring the financial services sector makes a 'fair and substantial contribution' towards the costs of the crisis.

7.3 Personal Taxes

In this section, we will consider some of the general principles underlying income tax, capital gains tax (CGT) and estate taxes and how these affect a client and impact on the construction of investment recommendations.

Income Tax

In most tax systems, the amount of income that is subject to income tax is the total that is received in a financial year. The year in question may be a calendar year or start at some other arbitrary point. It is often referred to as the year of assessment, recognising that it is the income arising in that year that will be assessed to tax.

Income can usually be grouped into different sources:

- Income arising from earnings or pensions.
- Interest income arising from bank deposits, money market accounts and bond interest.
- Dividend income.
- Income from property and other assets.

The reason for the grouping will vary and may include each being liable to different tax rates, having certain allowances and in which order they are treated, if there are higher rates of tax payable.

Tax rules and allowances will differ widely from one country to another, but the following are a few core concepts that an adviser should be aware of.

Residency	• Probably, the main concept is the residence of the individual, which will determine whether they are liable to tax; and, if so, on what sources of income.
Overseas Taxes	• Advisers should also be aware of any tax deducted from overseas dividends; this is covered in section 7.4 below.
Gross and Net	• Another is the concept of gross and net. Very simply, a gross payment is one that is made without any tax being deducted and a net payment is one that has had tax deducted before payment. • Grossing up simply involves converting a net return into a gross one, so that any tax liability can be calculated. For example, if an income payment is paid net of tax at 20%, then the net amount represents 80% of the gross. To find out the gross amount, simply divide the payment amount by 80 and multiply by 100.

Accrued Interest	• In addition, an adviser should be aware of the treatment of accrued interest on a bond purchase or sale. • Bonds are quoted clean but settled dirty, which means that accrued interest is added to the contract afterwards. The interest accrued up to the date of settlement of the sale is treated as due to the seller. It is, therefore, added to the cost paid by the purchaser and paid to the seller in addition to the proceeds of sale. • Such payments are usually regarded as interest and are liable to income tax or can be claimed as a deduction.
Zero Coupon Bonds	• Another concept of which an adviser should be aware is the treatment of zero coupon bonds (ZCBs). These instruments carry no interest; instead, they are issued (or bought) at a discount to their eventual maturity value. • Tax authorities generally have rules to ensure that ZCBs do not escape a charge to income tax. They will usually revalue the holding at the end of the tax year, and treat any gain or loss arising over the tax year as income.

Capital Gains Tax (CGT)

CGT is charged when an individual disposes of an asset and typically arises on the gain that is made when shares are sold or when a gift is made. This would also depend on any associated tax wrapper, such as a pension. A tax wrapper shelters any investment held within it from further tax. However, tax can be liable once the investments are removed from the tax wrapper.

As with all taxes, the detailed rules will vary from country to country, but an adviser should be aware of the tax rules in their own country, and ensure that the client has specialist advice if they have assets overseas or are non-resident.

As with income tax, there are some core concepts that can be explored.

The first is to understand which assets are liable to CGT and which are exempt. While this will vary, common features are that gains made on equities are chargeable. Further, there are usually exemptions for gains on government bonds and an individual's principal home. Understanding which are chargeable and which are not may have a material impact on the choice of assets that are invested in.

The next is to ensure an understanding of the availability of any accounts or schemes that offer tax advantages, whereby assets held within such a wrapper are free of CGT (eg, pension plans, savings wrappers and the special treatment of some venture capital investments). Again, these may direct certain investments that are considered or held in such accounts because of their tax efficiency.

The adviser should also be aware of how gains are calculated and the various exemptions and allowances that are available and whether there is different treatment for short- versus long-term gains.

Estate Taxes

Some countries, or jurisdictions, have no estate or inheritance taxes. Some charge on what a person gives away or leaves on death, and others charge on what a person receives.

Having spent a lifetime building up their estate, clients are often dismayed by the amount of estate taxes that are due, before it can be passed onto their beneficiaries. Reducing this liability can be a major financial planning need for wealthier and older clients.

Advisers should be aware of the various **inheritance tax (IHT)** thresholds allowed in the countries where their clients are based. In most countries, there are exemptions and allowances that can be taken advantage of to mitigate the eventual IHT that will be due. When a will is drafted, it will specify who the client wishes to inherit their estate, but careful consideration should also be given to drafting it in such a way as to maximise the use of any exemptions and allowances.

Clients should consider making gifts during their lifetime to reduce the eventual size of their estate liable to tax. In many countries, such gifts need to be made a number of years before the client dies, otherwise the tax advantage is lost, and so forward planning and taking action in plenty of time is, therefore, important.

7.4 Overseas Taxes

If investors hold shares in overseas companies, they will receive dividends that may have had tax deducted before payment. This is known as 'withholding tax' (WHT) and is usually deducted at source by the issuer or their paying agent.

If an investor receives a dividend from an overseas company that has had WHT deducted, it will still remain liable to income tax – this raises the risk of double taxation of the dividend or interest income. To address this issue, governments enter into double taxation treaties (or double taxation agreements (DTAs)) to agree how any payments will be handled. In very simple terms, the way that a DTA operates is that the two governments agree what rate of tax will be withheld on any interest or dividend payment.

Double taxation relief (DTR) may apply when an individual is liable to pay income tax on overseas earnings. As its name suggests, DTR helps to protect individuals from being taxed twice on the same income - once by the foreign country, and again by their home country. For DTR to apply, the two countries in question must have a DTA between them. There are many such agreements in place with countries worldwide, such as the UK and China, the US and Malta, and India and Japan. Generally, these DTAs set out that tax will be imposed only by the country where the income is earned, the capital gains are realised, or the foreign property is situated.

When an investor receives overseas dividend income, it is important to understand the two main methods for dealing with any tax deducted and how an investor can reclaim any overpaid taxes:

- Relief at source:
  - This method allows for a reduced rate of WHT to be deducted, instead of the standard domestic rate. This can be achieved by making the appropriate arrangements in the relevant country and obtaining the necessary documentation under the applicable DTA.
  - In some countries, significant documentation is required to implement this relief.

  - To benefit from relief at source, investors should ensure they complete and submit the necessary forms and documentation required by the foreign tax authorities. This often involves working with their financial advisor or custodian to make sure all paperwork is correctly filed in advance of dividend payments.

- Repayment claim:
  - Where relief at source is not available, or the arrangements cannot be put in place in time before the dividend is paid, relief can only be obtained by making a repayment claim.
  - However, to be able to claim relief from foreign tax or a repayment requires a detailed understanding of the relevant DTA, the tax laws of the country concerned and how the tax authorities in that country operate. This is why the specialist tax services of a custodian are usually used, as they have the knowledge required to manage this, and access to their network of sub-custodians to make the claim.
  - If relief at source is not available or the arrangements cannot be made in time before the dividend is paid, relief can only be obtained by making a repayment claim.
  - Claiming relief from foreign tax or obtaining a repayment requires a detailed understanding of the relevant DTA, the tax laws of the concerned country, and the operations of that country's tax authorities.
  - Investors must file a repayment claim with the foreign tax authority to reclaim the withheld tax. This process can be complex and time-consuming, often requiring the submission of various forms and proof of tax residency. Hence, the investor may need to use specialist tax services, as they possess the necessary knowledge and have access to a network of sub-custodians to facilitate the claim. Investors should coordinate with their custodians to ensure all required documents are prepared and submitted accurately.

7.5 Residency and Domicile

Residence and domicile are concepts that are central to systems of taxation as they determine who is liable to tax and, importantly, what assets or income may be liable. In this regard, some countries adopt a citizenship test to determine liability to tax.

Residency

Residency status holds significant sway over an individual's tax obligations including their liabilities to income tax, CGT and inheritance tax. It also deteremines whether they have access to any tax allowances and deductions, which could potentially reduce their overall tax liability.

Each country has its own rules which determine an individual's residency status, along with their liability to taxes. Most countries' tax systems can be loosely categorised as either a worldwide or territorial-based system of taxation.

- Under a residence-based worldwide system of taxation, residents of that country are taxed on their worldwide income and capital gains irrespective of where the income or gains arise. For example, the UK, Australia, Germany, Italy and Japan have a residency-based worldwide-income system of taxation.
- The US has a citizenship-based worldwide system of taxation, whereby US citizens are subject to US taxation, wherever in the world they may reside.

- Under a territorial system of taxation, residents are taxed only on income and capital gains arising in that country, and income or gains arising outside of that country are not liable to tax. Countries that have territorial tax systems include France and Hong Kong.

Some countries that adopt the territorial system extend the tax base of residents to include overseas income and gains, but only if such income or gain is remitted to the country of residence.

Whilst there are variations on the above systems, most countries' tax systems fall into one of these types.

The definition of 'residency' varies from country to country. For individuals, physical residency is the most important factor; many countries assess this by the number of days that an individual spends in the country and the regularity of their visits.

Domicile

Domicile is the country that a person treats as their permanent home, or lives in and has a substantial connection with. Every person must have a domicile, and it is not possible to have more than one domicile at any time. There are three types of domicile:

- Domicile of origin is the domicile that every person acquires at birth.
- Domicile of choice is acquired by a person residing in a country with the intention of continuing to do so permanently or indefinitely.
- Domicile of dependency arises in respect of children, married women in certain countries and mental incapacities.

The concept of domicile is of considerable importance in several areas of law. It is the link between a person and the legal system or rules that will apply for matrimonial, legitimacy, succession and taxation issues.

Location of Assets

The liability to some form of estate taxes usually depends upon the domicile of the individual and the location of the assets that they own. It is important that advisers who are dealing with clients from another country have an understanding as to how these taxes operate, as this may impact the arrangements that they put in place for their client. An inappropriate arrangement can lead to an unintended tax liability.

Domicile is a deciding factor in the liability to estate taxes. There are also complex rules that can result in someone having a deemed domicile in a country and, therefore, becoming liable to pay estate taxes.

Countries will have a set of rules to determine the location of where property is situated. For some clients who have limited assets overseas, this may not be an issue as the value may be below a minimum threshold at which estate taxes are payable. For others, however, an unexpected liability may arise. It is important, therefore, to recognise the need for caution when dealing with overseas assets.

End of Chapter Questions

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

1. **What is the purpose of client categorisation rules?**
   Answer reference: Section 1.1

2. **What are the six steps involved in the financial planning process as defined by the Financial Planning Standards Board (FPSB)?**
   Answer reference: Section 1.3.1

3. **How might a client's health status affect their attitude to investment risk?**
   Answer reference: Section 1.3.4

4. **What three components need to be established in order to determine a client's risk profile and in what order should they be established?**
   Answer reference: Section 2

5. **How does risk tolerance differ from risk perception?**
   Answer reference: Section 2.1.1 and 2.1.2

6. **Why are liquidity and time horizons important considerations when advising clients?**
   Answer reference: Section 3.3

7. **What is the main principle underlying Islamic finance?**
   Answer reference: Section 3.5

8. **Explain the purpose of an investment policy statement (IPS).**
   Answer reference: Section 4.4.1

9. **Why do regular reviews form an important part of the service that advisers offer clients?**
   Answer reference: Section 5

10. **A client has received an overseas dividend with withholding tax (WHT) deducted. How is this tax dealt with?**
    Answer reference: Section 7.4

Chapter Eight

Lifetime Financial Provision

1. **Retirement Planning** **331**
2. **Protection Planning** **345**
3. **Estate Planning, Trusts and Foundations** **363**

This syllabus area will provide approximately 13 of the 100 examination questions

1. Retirement Planning

1.1 Introduction

It is generally recognised that people are living longer than ever due to medical advances and general improvements in health and that most people's life expectancy has increased significantly over the last few decades. A client's health may influence their attitude to risk. A client in good health, who expects to live well into old age, may take the view that they need to be cautious because of the length of time they expect to spend in retirement, hence, they may need to spread out their capital over a number of years.

The bad news, however, is that in order for them to enjoy those extra years, they need a level of income that is enough to fund the lifestyle that they would like to enjoy. Being able to enjoy rather than endure retirement requires individuals to plan and take action well in advance, to achieve that objective.

Worldwide, state pension benefits are equivalent to only about 40% of net average earnings. Changing demographics and the increasing cost of state pension provision will see this source of retirement income decline and become, at best, modestly adequate. The increasing cost of providing state pensions is forcing governments to reassess how much they pay. Therefore, relying on the state to provide a comfortable retirement is clearly not going to work. Existing pension plans may also fall short of providing the funds needed for retirement.

Substantial amounts of capital need to be built up to provide a worthwhile income in retirement, meaning that the sooner the individual starts to save for retirement, the more chance they have of achieving a satisfactory result.

1.2 Intended Retirement Age

Learning Objective

8.1.1 Understand the impact of intended retirement age on retirement planning

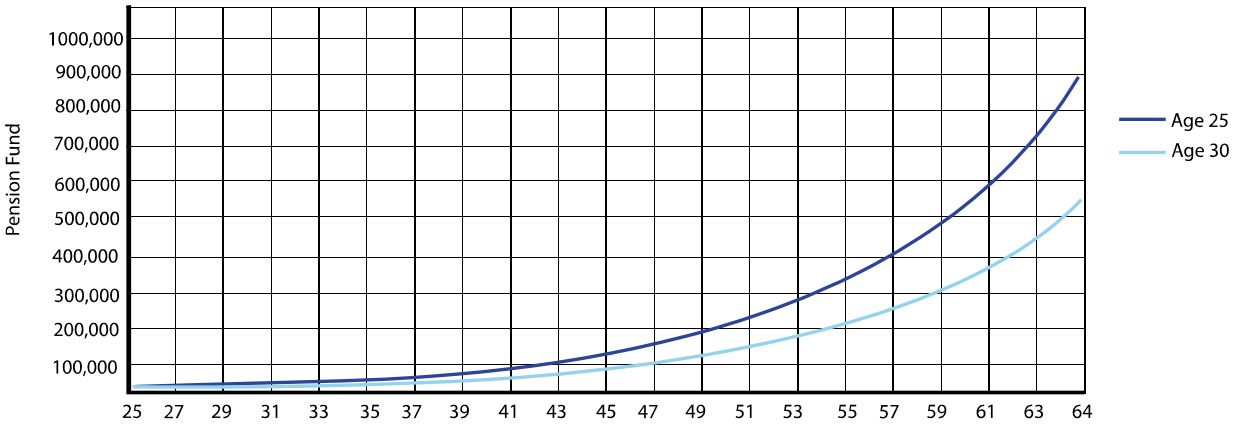
Once an individual finishes work, they will clearly cease to generate income, yet they will still have to meet their living expenses and other commitments. This presents a major financial planning need.

The age when retirement occurs will vary considerably, from those who plan to retire from work at normal retirement age (NRA, say, in their 60s) to those who aspire to finish earlier (say, in their 50s), and others later (say, in their 70s). Whichever may be the case, they are likely to have to fund at least from 20 to 30 up to 45 years of living and leisure expenses. This is assuming that the individual enjoys good health and fortune and is not forced to finish work earlier through either ill health or job loss.

This emphasises the need to plan for retirement and to start saving as early as possible. In chapter 5, we looked at compound interest rates and future value calculations and using those concepts, we can quantify the impact of delay in saving for retirement.

To illustrate the impact of delay, let us assume that an individual starts to save at age 25 into a pension fund that grows at an average rate of 5%, until retirement at age 65. They save $1,000 in the first year, and they increase the amount saved by 10% each year. By retirement, they could expect to have built up a pension fund of close to $900,000, but delaying starting saving for, say, five years would mean that the fund would be worth only around $525,000, as the diagram below illustrates.

Impact of Delaying Saving for Requirement



The difference over such a long period is therefore significant, but what is equally worth highlighting is the effect that this would have on income in retirement. Assuming that the pension fund could generate an annual income of 5%, then the larger fund would generate an income of around $45,000, compared to around $26,000 if the start of saving were delayed by 5 years.

Example

We can estimate the future value of a series of regular savings by adapting the FV formula from chapter 5. While this will not provide as accurate an estimate as using a spreadsheet, it is useful to provide an indication of how a pension fund might grow in size.

If investing at the start of each year, then the following formula may be used:

$$FV = \text{Payment} \times \left[\frac{(1+r)^n - 1}{r} \right] \times (1+r)$$

For example, say that a client wants you to estimate what the value of their pension savings would be if they invest $10,000 at *the beginning of each year* for 20 years and earns an average rate of 5% compounded annually. The accumulated value of the fund at the of the 20-year period will be:

FV = $10,000 x [(1.05^{20} − 1) / 0.05)] = $10,000 x 33.06595 x 1.05 = $347,192

We can check this calculation in the following table:

Year	Balance at start	Rate	Amount earned	Balance at end
1	10000.00	5%	500.00	10,500.00
2	20500.00	5%	1,025.00	21,525.00
3	31525.00	5%	1,576.25	33,101.25
4	43101.25	5%	2,155.06	45,256.31
5	55256.31	5%	2,762.82	58,019.13
6	68019.13	5%	3,400.96	71,420.09
7	81420.08	5%	4,071.00	85,491.08
8	95491.09	5%	4,774.55	100,265.64
9	110265.64	5%	5,513.28	115,778.92
10	125778.93	5%	6,288.95	132,067.88
11	142067.87	5%	7,103.39	149,171.26
12	159171.27	5%	7,958.56	167,129.83
13	177129.83	5%	8,856.49	185,986.32
14	195986.32	5%	9,799.32	205,785.64
15	215785.64	5%	10,789.28	226,574.92
16	236574.92	5%	11,828.75	248,403.67
17	258403.66	5%	12,920.18	271,323.84
18	281323.85	5%	14,066.19	295,390.04
19	305390.04	5%	15,269.50	320,659.54
20	330659.54	5%	16,532.98	347,192.52

If investing at *the end of each year*, then the following formula may be used:

$$FV = \text{Payment} \times \left[\frac{(1+r)^n - 1}{r} \right]$$

For example, if the investments were made at the end of the year, the accumulated value of the pension fund would be:

FV = \$10,000 x [(1.05^{20} – 1) / 0.05)] = \$10,000 x 33.06595 = \$330,659.

Note that the difference between this and the earlier example (of \$16,533) is solely accounted for by one earlier payment being invested over the entire 20-year period, ie, \$10,000 x (1.05^{20} – 1) = \$16,532.98.

This approach can also be used to illustrate to clients the impact of different intended retirement ages. If we stay with the earlier example where the client starts to invest at age 25, imagine the client wants to retire early and asks what the impact would be. The table below shows the estimated size of the pension fund and retirement income it could generate for each year. Seeing it presented in this way then opens up the conversation about whether the client's goals are achievable. The client can then consider whether the estimated pension income is sufficient, whether they need to delay their intended retirement or increase their pension savings to achieve their goal.

Intended Retirement Age	Estimated Pension Fund	Estimated Pension Income
50	\$175,000	\$8,750
55	\$300,000	\$15,000
60	\$525,000	\$26,000
65	\$900,000	\$45,000

An individual may be fortunate enough to have good pension arrangements through their employer which can supplement savings made during their working life, or they may make their own arrangements in any of a variety of ways (eg, from saving, investment in property or business assets).

Retirement planning, therefore, needs to be based upon a broad approach and one that is flexible enough to accommodate a wide range of strategies.

In an ideal world, one would know exactly how much one needed to save in order to live comfortably in retirement, due to knowing exactly how long they will live for, and the expenses. However, life is not that predictable – especially as we may live for a longer period in retirement than we had expected.

A number of variable factors will affect the outcome over the years, including the rate of return on investments, the rate of inflation, the consistency of amounts saved, other income sources outside pension arrangements, length of life and others.

1.3 Retirement Planning Products

Learning Objective

8.1.2 Know the types of retirement planning products, associated risks, suitability criteria and methods of identifying and reviewing

Pension schemes tend to receive favourable tax treatment from governments, aimed at encouraging individuals to make their own retirement provision and thus relieve the state of the need to fund it beyond the basic state pension. The tax benefits tend to be twofold: tax relief on contributions made into the scheme, and either exemption or additional allowances against tax on gains and dividend income.

For this reason, pension arrangements will often provide one of the best investment vehicles for meeting clients' needs to invest for retirement.

The adviser will clearly need to determine the details of any scheme that a client is already part of or has the option to join. In doing so, they will also need to establish the availability of benefits from the arrangements; at what age the client can retire and take benefits; and whether these benefits will be in the form of a tax-free lump sum, with the remainder as an ongoing income or some other arrangement. For the ongoing income, it should also be established whether there will be a continuing pension for any surviving spouse/civil partner or other family member, following the investor's death.

The adviser should also identify the extent of any death benefits which may be provided in the event of death before retirement. It is usual to provide for a lump sum to be paid, either by a return of part of the fund or by life assurance.

We will now consider briefly the major types of pension products.

1.3.1 Occupational Pension Schemes (OPS)

Occupational pension schemes are, as the name implies, pension schemes provided by an employer, usually as part of their employees' remuneration and benefits package.

The main features of such schemes are:

- It is the employer that sets up the scheme.
- The employer contributes to the overall cost, providing a significant extra benefit to the employee.
- The scheme usually benefits from very attractive tax treatment (eg, tax relief on contributions).
- The scheme can provide a very efficient vehicle for meeting the retirement needs of an individual.

The amount of employee contribution will be for the employer to decide, as will any eligibility conditions for joining (eg, who the scheme is open to, and any minimum age and service conditions). OPSs usually require the employees to contribute a proportion of their earnings, known as contributory pension schemes; in some cases, however, the employer funds the whole cost, known as non-contributory schemes.

The benefits payable under an OPS will depend upon whether it is a defined benefit (DB) scheme or a defined contribution (DC) scheme. It is essential to establish which type of scheme a client is a member of.

Defined Benefit (DB) Schemes

An OPS that takes the form of a DB scheme, provides a predetermined pension amount based on specified criteria. There are two types: final salary schemes, where the pension received is related to the number of years of service and the individual's final salary; and career-averaged schemes, which calculate the pension based on the average salary earned over the individual's career.

A DB scheme essentially promises a given level of income at retirement, usually expressed as a proportion of final earnings. Contributions to the fund will normally be made by both the employer and the employee, although who contributes what will vary from scheme to scheme.

For the employee, this has the advantage of allowing retirement plans to be made with the knowledge of what income will be received. Its potential disadvantages are that, in the final years of working, the employee may not be earning as much as when they were at their peak earning power. In assessing such a scheme, consideration also needs to be given to the funding position of the scheme and whether it can afford to pay out the promised benefits.

In a DB scheme, the client can have some reasonable certainty about the amount of income that they will receive in retirement, so the main concerns for discussion with an adviser will be whether this is sufficient, how any annual increases are calculated, and the long-term security of the pension fund.

Defined Contribution (DC) Schemes

Alternatively, the OPS could take the form of a DC scheme, where the pension provided is related to the contributions made and investment performance achieved. A well-known example of such is the 401K schemes found in the US which is a qualified retirement plan that allows eligible employees to save and invest for their retirement in a tax-advantaged account.

In a DC scheme, the approach is different. Contributions will be made to the scheme by both the employer and usually also the employee and these are invested to build up a fund that can be used to purchase benefits at retirement. These funds will usually be held in a designated account for the employee, and this gives certainty that the funds will be available at retirement.

In a DC scheme, the eventual size of the pension fund will depend upon its investment performance. At retirement, the client will be looking to use this fund to generate the pension, possibly by purchasing an annuity. The amount of pension that the client will be able to generate will therefore depend upon the size of the fund at that time and the prevailing rates of interest at the time of retirement.

The disadvantage of a DC scheme, therefore, is that the actual income the employee will receive in retirement will not be known in advance of retirement, and this therefore makes effective planning significantly more difficult. In this pension, most risks are borne by the employee as no set pension amount is defined. Hence a final pension is down to how much money has been invested and how well the invested-in funds have done.

Historically, if an employer offered an OPS, it would almost always be offered as a DB scheme. Due to the provision of a 'guaranteed' income throughout retirement, DB schemes are seen as the 'gold standard' by individuals and their financial dependants. However, over time, such schemes have become less popular with employers, as they have to cover any deficit between payments to members and how much is available in the pension fund. Many employers who offered DB schemes have therefore closed their schemes, in one of three ways:

- **Hard freeze or termination** – the scheme is closed to new workers, and existing members are no longer allowed to accrue benefits.
- **Soft freeze** – the scheme is only closed to new workers, while existing members can continue to accumulate benefits.
- **Partial freeze** – the scheme is frozen for some (but not all) members.

Identifying and Reviewing Types of Scheme

Identifying which type of pension scheme a client is a member of may be straightforward as it is readily known to the client or to the market. That said, it may often require an examination of the scheme's documentation, especially if it uses a title to describe the type of scheme that is not clear. In general terms, the difference between the two depends on who funds the pension scheme and the basis on which the resulting retirement pension is paid.

1.3.2 Suitability

Although the general principle is that DB schemes should be preferred to DC ones, there is no way of knowing whether a client would be better or worse off under a DB or DC scheme without determining the clients' requirements, risk profile and an analysis of the pension scheme.

Some factors to consider are:

- For DB schemes:
  - Amount of retirement income that will be generated and any other benefits such as any pension payable at death to a surviving spouse/civil partner.
  - The security of income such schemes provide in retirement and how pension increases are calculated.
  - Investment risk in terms of funding the retirement pension sits with the employer, so the financial position of the employer should be investigated to determine its ability to meet these requirements.
  - The funding of the scheme should be investigated to determine its viability in terms of the certainty of ongoing payment of the pension income.

- For DC schemes:
  - The options available are to use the accumulated pension fund to provide an income in retirement such as an annuity or an option to access the capital of the fund.
  - As above, the amount of retirement income, how pension increases are calculated and other benefits payable.
  - The size of the fund at retirement depends on investment performance during the life of the pension fund and very particularly at the time when retirement takes place which could be when markets are high or when markets have crashed. Options to de-risk the portfolio as the

intended retirement age approaches should be established and whether lifestyling is automatic or has to be initiated (lifestyling is an approach to automatically switch to lower risk assets as the intended retirement age approaches).
    - The retirement income that can be generated at retirement depends on the size of the investment fund and so the prospects for annuity rates should be considered (or other options that are possibly available).

- General:
    - A client's expected life expectancy and health may affect the choice of options. For example, a client in poor health with limited life expectancy may wish to access the capital of the pension fund rather than having to take out an annuity.
    - A client's wealth and general financial position may also affect the investment strategy and suitable funds as the de-risking approach may need to be revised.

1.3.3 Personal Pensions

An OPS is not available to everyone and, in this case, personal pensions are available for an individual to provide a vehicle for providing retirement benefits; these are a form of DC scheme. These pensions will usually also benefit from the same generous tax treatment, making them an effective alternative. A personal pension has the benefit that the individual can choose the provider and the funds that they are invested in, but is clearly at a disadvantage as there are no employer contributions.

Many employers actually organise group personal pension schemes for their employees, by arranging the administration of these schemes with an insurance company or an asset management firm. Such employers may also contribute to the personal pension schemes of their employees, but the employee usually chooses their own investments from the list available with that provider, though each company will also select a default option for employees not wishing to choose a custom allocation.

1.4 Quantifying Needs in Retirement

Learning Objective

8.1.3 Be able to calculate the financial needs for retirement

As with every other aspect of financial planning, preparation for retirement requires following a structured process.

The key stages of the process are:

- establishing the client's **current financial position**
- establishing the client's **aspirations for retirement**
- determining **what capital will need to be available** at retirement to fund their plans
- determining **how much income will be needed** in retirement to fund their intended lifestyle
- assessing the client's existing retirement plans along with their assets, liabilities and protection products
- developing an investment and protection strategy to meet their needs

- identifying appropriate solutions, and
- implementing that strategy and keeping it under regular review.

1.4.1 Current Financial Position

As with other types of financial planning, as part of the initial meeting with the client, the adviser will need to collect all of the basic factual information regarding the client.

The principle of the fact-find was examined in chapter 5, section 3, but it is worth noting that the core information relevant to retirement that will be needed includes:

- **Personal information** – this will include age, marital status and employment information.
- **Dependants** – details of children and any other dependants whose needs will require to be taken care of.
- **Health** – information about the client's health, their job and whether they engage in any potentially dangerous or hazardous activities.
- **Assets** – the extent of their assets and savings and any expected inheritances.
- **Liabilities** – what debts have to be serviced and how they would continue to be met or repaid in the event of illness or death.
- **Income and expenditure** – details of the client's income and expenditure so that their potential income needs in retirement can be established.
- **Protection** – details of any protection policies in place that are relevant to the retirement planning process.
- **Any large, expected costs** – such as weddings and university fees.

While the basic information needed is the same as for other types of financial planning, where the process for collecting the information differs is that the emphasis is on analysing where the client is now and where they expect to be in retirement. Additional information that will be needed will, therefore, include:

- anticipated retirement date
- expected lump sum payments from any existing pension arrangements
- estimates of the income that the client can expect from any existing pension arrangements
- the amount of any state pension that might be payable, and
- what level of cash reserves the client will need for emergencies and the unexpected.

In order to develop a strategy from the information collected, the adviser will need to understand in detail the client's expectations and will need to consider, amongst other things, the following:

- an estimate of any lump sum that may be needed at retirement to repay items such as mortgages or to fund things such as special holidays, and
- an estimate of the income they will need in retirement, taking into account inflation.

The next stage is, therefore, to quantify what the client's aspirations and needs are.

1.4.2 Aspirations and Needs

People's expectations of retirement have changed markedly since the 1980s, when DB schemes were more prevalent, and life expectancy was shorter; and the adviser will need to understand the changing factors that may affect a client's circumstances and their retirement aspirations.

After establishing the client's intended retirement age, the next stage is to make an estimate of both the lump sum and income requirements that will be needed. This needs to take account of long-term needs, as well as any immediate requirements, and to factor in the possible need for medical treatment and long-term care.

One way of investigating with the client what income they will need in retirement is for the client to complete an expenditure plan such as the following:

Outgoings	Pre-Retirement	Post-Retirement	Difference
Rent or mortgage payments			
Other loan repayments			
Credit card repayments			
Local taxes			
Food			
Clothing			
Power and water			
Schooling costs			
Telephone and internet connections			
Car costs including fuel, servicing and insurance			
Socialising			
Holidays and breaks			
Other			
Total			

The client should use this to record their current expenditure and then make an estimate of what they expect it to be post-retirement. Retirement will generally bring about a lowering of many items of expenditure, such as reduced travel costs as there is no need to travel to work, but an increase in others such as holidays and breaks. This assessment will give an indication of how much net annual income will be needed in retirement to finance the client's lifestyle aspirations.

Establishing future expenditure, however, can be difficult. If the client is not in a position to make a realistic assessment, then, as a rule of thumb, it is generally reckoned that a person will need about three-quarters of their net income to maintain a similar lifestyle in retirement.

The next steps are to determine how much the client needs to fund themselves and how much they can expect to be funded from any existing pension arrangements that they have, plus any state pension payments they might receive.

Example

A client requires $50,000 of income annually to live off, before tax, and that they can realistically expect to receive a pension of $30,000 from their own pension plan and $5,000 from a state pension. They will, therefore, need to fund the difference of $15,000.

If we assume that current rates would allow the client realistically to earn 6% pa, then how much of a lump sum will be needed? A simple calculation shows us that they will need a lump sum of around $250,000 (ie, $15,000 / 6).

However, this assessment is, however, made in today's money, so the adviser will, therefore, need to make an estimate of what this may need to be in the future to make an allowance for inflation.

To calculate this, we need to know the client's intended retirement age and use an estimate of what inflation might be over that period. Predicting what inflation might average over a period of time is fraught with problems, but the adviser should look at the trend rate of inflation in their country and then select a figure that will provide a conservative estimate for the client.

Let us assume that the client intends to retire in 25 years and estimate that inflation might average 4% per annum over that period. To calculate the lump sum that the client might require in 25 years' time involves multiplying the lump sum needed ($250,000) by the annual rate of inflation, 25 times, as follows:

- Convert the rate of inflation to a decimal and add 1 to get 1.04.
- Multiply 1.04 to the power of 25, to give 2.66658… (where the '…' symbolises that the number continues indefinitely).
- Multiply the lump sum of $250,000 by 2.66658…
- This gives an inflation-adjusted lump sum needed of $666,459.

This can be shown mathematically as follows:

$$\text{Lump sum} = \$250{,}000 \times (1 + 0.04)^{25} = \$666{,}459$$

This is a much larger sum, but its relevance is to understand what size of fund the client really needs to establish. After all, if the client's savings grow to $666,459 and they can earn the expected 6% then the fund will generate $39,988. This is exactly the same as the annual income needed of $15,000 allowing for inflation, in other words $15,000 x $(1 + 0.04)^{25}$.

This example assumes that the client will use the lump sum only to generate the required income and not use part of their capital to supplement income. What this exercise does gives us though is a target figure that needs to be generated by the investments the client will make.

Having established this, the adviser should add any other lump sums that will need to be generated to meet the client's plans and aspirations. They will then take into account any expected lump sums that the client may reasonably expect to receive, for example, from any protection policies they may have, from any pension plan or from inheritances.

This will leave a net amount of capital that needs to be generated. Again, this will need to be adjusted for inflation, and the same calculation as above can be used to determine this figure.

1.4.3 Other Sources of Capital and Income in Retirement

Pension arrangements may represent a major part of the client's assets that will be used in retirement, but they are not the only solution though, and a wide range of other assets will need to be taken into consideration. The rest of the client's assets will also contribute towards the funds that are needed to finance retirement. This will include:

- Their home which, although still required in retirement, offers the opportunity for them to free up capital. For example, selling and purchasing something cheaper, or equity release (if available).
- They may own property that is rented out and which can either provide a lump sum for investment or a continuing income source.
- They may have their own business. There may be the opportunity to sell this as a going concern, to realise assets, or for the business to be continued by others and for them still to receive income through reduced involvement, consultancy arrangement or dividends.
- There will also be the whole range of other assets that the client builds up during their life, including cash deposits, collective investment funds and other investment products.

In almost all cases, a mix of asset types is likely to be necessary to meet the client's retirement planning objectives, along with appropriate protection products.

1.4.4 Assessing Existing Pension Plans

Having established when the client wishes to retire, what income and capital sum they will need to achieve that, and what assets they already have in place, we can move on to assessing whether their existing retirement plans are suitable for their objectives.

The adviser will need to determine what type of pension plan the client has and what retirement benefits it will generate. It will, therefore, be necessary to identify:

- the age at which benefits can be taken
- the expected amount of income that will be payable if it is a defined benefit scheme and how future increases to the pension are calculated
- if it is a DC scheme, the value of the pension fund and which funds it is invested in
- any penalties, such as actuarial reductions, that may be made for taking retirement benefits early, and
- the lump sum that can be taken at retirement.

As well as establishing what type of scheme the client may be a member of, the adviser should also look at whether additional contributions can be made. The client may be able to make extra contributions to the pension scheme in order to make additional provision for retirement, and these may also benefit from generous tax treatment.

If it is not possible to make additional contributions into the pension scheme, the adviser should investigate whether the company pension scheme may also have arrangements where further contributions can be made into a separate pensions vehicle. These are sometimes known as additional voluntary contributions (AVCs) where they are part of the scheme, itself or freestanding AVCs (FSAVCs) if made with another product provider. AVCs and FSAVCs give the individual a greater degree of choice of both provider and how they are invested.

1.5 Presenting Recommendations

Learning Objective

8.1.4 Know the elements to be included in a recommendation report to clients

The recommendations made should be presented to the client in a written report so that they have the time to consider the detail of what is being suggested and so that there is a documented plan that can be referred back to at a later date, when progress is being reviewed.

The report will need to summarise the details obtained from the client and their current position. It should then detail the objectives and priorities that have been agreed, and go on to explain how the recommendations that are being made have been arrived at.

The report will therefore need to set out the results of the analysis that has been undertaken.

Needs and Goals

What the need identified was and any goals.

Existing Arrangements

Anything in place at the moment and how it fits or does not fit in with the clients' needs and goals.

Restrictions

Any client restrictions or preferences agreed with the clients – eg, ethical, responsible or sustainable considerations, or religious beliefs.

Income

- The level of income needed in retirement, adjusted for inflation.
- The proportion of income to be met from existing pension arrangements.
- Whether additional pension contributions can or should be made.

- Whether the existing pension arrangements are suitable or should be switched to an alternative provider.
- The amount of additional income that will need to be generated in retirement is over and above that received from state, company and personal pensions.

Capital

- The amount of capital needed at retirement to provide an investment fund to generate the additional income needed in retirement.
- The amount of capital needed to meet other plans of the client at retirement and to provide a cash reserve into retirement.
- The value of any existing assets and the extent to which they can be utilised and invested to meet these needs.
- The extent of any funds that are expected to be received from other sources, such as insurance policies or inheritances.
- The growth rate that needs to be achieved to generate the lump sum needed.

Protection

- The extent of any existing protection policies that are in place to address areas such as mortgage protection, medical insurance and life cover that are relevant to the advice being provided.
- Essential gaps in protection cover that need to be dealt with.

It will then set out the recommendations that are being made, how they relate to priorities and objectives, and an explanation of the choice of provider.

The report will be accompanied by any supporting product brochures, illustrations and key investor information documents (KIIDs) / key investor documents (KIDs). It will also note the action needed to implement the requirements.

The purpose of the report is to provide the client with sufficient detail so that they can understand the recommendations that are being made and so make an informed decision. The adviser will, however, need to meet with the client to discuss the recommendations and make sure, by appropriate questioning, that the client fully understands what is being proposed.

The Recommendation

The adviser needs to make clear what they are recommending for the client and why: that would include, for example, clients' levels of risk and conclude with why the advice and recommendation are suitable for clients. Advisers should also make sure that any fees and charges are listed.

Also, what is important is anything that has been discounted and what was not covered, as this may still need to be reviewed.

2. Protection Planning

In this section, we will consider some of the key features of a wide range of life and protection products. Such products are designed to provide financial protection in case certain risks occur, but it needs to be remembered that life is full of risks and challenges, and a judgment needs to be made as to which areas are in need of protection. Just as it is not possible to eliminate risk entirely, it is not financially feasible for clients to insure against all events.

As part of the meeting with the client, the adviser will collect all of the factual information needed about the client. You will see that the core information list is very similar to the one in section 1.3.1 of chapter 7, but the focus of the questioning is slightly different, depending on what type of planning is being considered:

- **Personal information** – this will include age, marital status and employment information.
- **Dependants** – details of children and any other dependants whose needs will require taking care of.
- **Health** – information about the client's health, their job and whether they engage in any potentially dangerous or hazardous activities.
- **Assets** – the extent of their assets and whether they are sufficient to cover the impact of loss of job, or illness.
- **Liabilities** – what debts have to be serviced and how these would continue to be met or repaid in the event of illness or death.
- **Income** – details of the client's income so that their income after tax can be established.
- **Expenditure** – the regular expenditure of the client so that the extent of their disposable income and their ability to meet the cost of any protection cover is known.

The next stage is to identify which needs should be addressed.

2.1 Main Areas in Need of Protection

Learning Objective

8.2.1 Know the main areas in need of protection: family and personal protection; mortgage; long-term care; business protection

Life assurance and protection policies are designed and sold by the insurance industry to provide individuals with some financial protection in case certain events occur.

Although product details may vary from country to country, the general principles of what the adviser should be looking for in certain products, and their main features should be constant. The big insurance companies are global operations, so the range of products they offer have common features and are similar whether offered in North America, Europe or the Asia/Pacific regions.

The table below gives some indication of the range of needs and protection products available.

Areas in need of protection	Life and family	Lifestyle and income	Home and contents	Business
Protection products	• Life cover • Critical illness cover • Life or earlier critical illness cover • Medical cover • Long-term care	• Income protection • Accident and sickness cover • Unemployment cover	• Household cover • Mortgage income protection	• Key person protection • Shareholder protection • Partnership protection

It is important, therefore, to appreciate what the main areas in need of protection are and why that is the case. With an understanding of this, the adviser will be able to consider the client's personal circumstances and make an assessment of whether taking out protection should be considered.

- **Family and personal** – the main wage-earner or another family member might suffer a serious illness. In some cases, the illness may be critical. Without protection, the family could lose its main source of income and may have insufficient funds to live on. Additionally, there may be medical bills and care costs arising. Similarly, the main wage-earner could lose their job, in which case the family will lose its main source of income and may have insufficient funds to live on.
- **Mortgage** – job loss or illness suffered by the main wage-earner could result in difficulty in meeting mortgage payments. Furthermore, the main wage-earner might die before the mortgage is repaid, saddling the family with ongoing mortgage repayments. Protection policies could be used to address these issues.
- **Long-term care** – if an individual suffers mental and/or physical incapacity, the cost of care could drain and perhaps exhaust the individual's savings.
- **Business protection** – a key person within a business might die or suffer a serious illness. The business may no longer be able to generate sufficient profits without the key person's contribution. Alternatively, a substantial shareholder or partner within the business may die, and their shareholding or partnership stake may need to be bought out by the remaining shareholders/partners.

2.2 Assessing Protection Priorities

Learning Objective

8.2.2 Know the need for assessing priorities in life and health protection – individual and family priorities

To assess what type of protection is required involves the adviser exploring with the client what might happen and what the consequences might be. Although none of us can predict the future, it does not prevent us considering future events and then assessing whether we are prepared for that possibility.

This can be achieved by looking at each of the main areas in need of protection and asking what could happen and what would be the effect if it did. The exploration of these points will reveal the extent of the areas in which a client should consider taking action.

Area of need	What could happen	Potential impact
Life and family	You suffer a fatal heart attack	Your family lose your income and have insufficient funds to live on
	You are diagnosed with a critical illness	You face major medical bills and care costs
	You or someone in your family needs surgery	You may want immediate access to a private hospital
	You are unable to look after yourself and need full-time care	The cost of care exhausts all of your savings
Lifestyle and income	You lose your main source of income	Your savings are insufficient to maintain your lifestyle
	You suffer an accident or sickness that prevents you from working	Benefits from the state or your employer are insufficient
	You lose your job	It takes a long time to find a new job and you exhaust your savings
Home and contents	Your home is burgled or flooded	Major expenditure to repair any damage and buy new contents
	You lose your job	You are unable to meet your mortgage repayments
	You die before your mortgage is repaid	Your family are saddled with ongoing mortgage repayments
Business	A key person in your business dies	The business can no longer generate its products or sales
	A major shareholder dies	Their shareholding needs to be bought out
	A partner is no longer able to work	Their share of the partnership needs to be bought out

Having determined that protection needs to be considered, the adviser also needs to move on to find out whether doing so is sufficiently important that the client needs to prioritise it appropriately.

2.2.1 The Prioritisation Process

Learning Objective

8.2.3 Understand the requirement for prioritising protection needs

Simply because a need has been established does not mean that it can be addressed. Affordability will be a major constraint on a client's ability to protect against all of the risks that might arise. The adviser will, therefore, need to guide the client through a planning and prioritisation process.

This will involve:

- listing the areas that need to be dealt with
- quantifying the impact and likelihood of each
- ranking them in order of importance
- reviewing existing arrangements
- assessing the cost of providing protection
- identifying the extent and scope of protection that the client can afford, and
- establishing a plan which will allow some of the needs to be addressed.

Prioritising such decisions is not an easy process, especially as the client, having recognised the need, may want to deal with all of them.

The adviser, therefore, has a key role in explaining the process to the client. They need to manage the natural concerns that this will generate and explain that, although a risk has been identified and needs to be addressed, the client needs to take into account the likelihood of it occurring.

The client's age and personal circumstances may also give some indication as to what to prioritise. The below example gives the stages of a stereotypical '2.4 children' family, but there are many variations – there are too many individualised situations to cover here, and each client's unique needs must be addressed accordingly:

- If the client is in their 20s or 30s and is married with children, if anything were to go wrong (eg, serious illness, redundancy), it would have very serious financial consequences. Life, sickness and redundancy cover should be considered a high priority.
- If the client is in their 40s, then their life and financial position may have started to change. Life and mortgage cover may become less important, depending upon whether they have paid off the mortgage and if any children have left home. Sickness cover remains important, however, as increasing age brings more risk of illness.
- In their 50s, their priorities will change. Life and redundancy cover may not be as important, as the children will have left home, and the mortgage possibly paid off. Sickness cover remains important and consideration of long-term care starts to appear on the planning horizon.
- When the client is in their 60s or older, the need for redundancy cover is usually no longer applicable. Life cover is even less relevant and, instead, clients will be thinking about preserving their wealth and how to reduce any inheritance tax liabilities. Health and sickness cover should be a particular concern as well as long-term care. Further considerations will apply for inheritance tax planning, which is considered in section 3.

The adviser also needs to explain the long-term nature of this process, namely that the prioritisation exercise can only identify the immediate priorities that should and can be addressed. The remainder still needs to be addressed at some stage when the client's circumstances allow, ie, they have been deferred and not abandoned.

The process of prioritisation will enable a plan to be established of what needs doing and what will be considered later. This leads naturally to the realisation that financial planning is an ongoing exercise and that the client and adviser will need to regularly review progress and reassess the plan in the light of changes to needs, circumstances and priorities. Clients should also be encouraged to maintain open communication with their adviser, should any changes arise in the interim.

2.3 Quantifying Protection Needs

Learning Objective

8.2.4 Understand how to quantify protection needs

So far, the adviser has collected information about the client, assessed which areas are in need of protection and agreed an order of priority of what will be addressed.

Before moving on any further, the adviser needs to quantify the type and level of protection needed for each of those areas. Quantification is simply about comparing the future position of the client with their current position and then assessing the shortfall. This can begin with producing an income and expenditure plan that documents the client's current position.

Outgoings		Income	
Rent or mortgage payments		Salary after tax	
Other loan repayments		Other income – after tax	
Credit card repayments			
Local taxes			
Food			
Clothing			
Gas, electricity and water			
Schooling costs			
Telephone and internet connections			
Car costs including petrol, servicing and insurance			
Socialising			

Outgoings		Income	
Holidays and breaks			
Other			
Total		**Total**	

The client can then be asked how this position might change in the event that they are no longer able to work, and the revised result will show what is at stake.

This exercise can then be continued on by considering what would happen if something happened to the client or their partner (if applicable), seeking an understanding of what the impact would be on the family:

- if the client their partner are to die, or
- became unable to work. For example, who would look after the home or the children if the client or partner were unable to?

This may then indicate that it is necessary not just to replace lost income, but also to generate additional income or a capital sum.

As a result, there are a number of other factors that should be considered, including:

- The adviser should determine whether the client will need **capital or income**, and whether this is best met by a lump sum payment or the generation of income, or a combination of both. Generally, a lump sum will be the best option, as it gives the client the flexibility to use the capital and either invest it for income or draw on it as necessary.
- The amount of income that can be generated from a capital sum will depend on the level of interest rates at the time the funds are invested and will vary. This will introduce a level of uncertainty if the client needs a given level of income. As a result, any assumptions made need to be conservative.
- The effect that inflation will have on the income flow should be established. The importance of this will depend on the length of time the income might be needed for.

These factors will direct the adviser towards the consideration of a type of policy that is appropriate to the client's need. This will also involve choosing between different types of policy that may be capable of addressing the needs of the client. If a regular income is required, for example, this need could be met by an income protection policy, but also by a term assurance policy that would pay a lump sum that could be invested.

This process can then be repeated in a similar fashion for all of the other areas that may be in need of protection.

2.3.1 Existing Protection Arrangements

The next stage in the process is to review in detail the existing protection products that the client has, to determine if there are any gaps and make sure that all protection needs have been filled. In addition, review the existing arrangements to make sure that they are suitable, meeting the client's needs and checking that the charges are appropriate.

As we saw in chapter 7, the amount of information needed from the client is extensive and obtaining it is essential, otherwise the planning process will be flawed. This also applies to the details of the existing arrangements the client has made, and the adviser will need to ensure they have sufficient information to assess their suitability.

Any life assurance products the client holds may be intended to provide protection or to be used for investment purposes, and the adviser needs to obtain details of the type of policy, its purpose, the premium, the term and the potential benefits that may arise on death or maturity.

They should also find out from the client why they were purchased, as this will provide further useful information. It may indicate their future requirements or show that it is now superfluous, for example, where a life assurance policy was taken out to protect a mortgage which has since been repaid.

Once the adviser has all of the information necessary, they will then need to measure the suitability of these against the client's current circumstances. There are many factors to consider, and these will be driven by the type of product or arrangement. Items to consider include:

- their relevance to the prioritised needs of the client
- the extent of the cover provided and whether this is adequate given the client's current needs
- whether there is an option for the cover to be extended
- whether they are affordable options or whether the client's circumstances have changed so that they can afford to increase what is paid
- whether the original timescale is still valid
- the degree of risk associated with the product considered against the client's risk tolerance
- the extent of any diversification or lack of it
- the level of charges compared to comparable products, and
- any encashment penalties.

This analysis will then provide the basis for continuing the financial planning process. The results of the analysis will show the following:

- which protection products should be retained
- where the amount of cover should be increased or decreased
- products that should be disposed of as they no longer meet the client's objectives, and
- protection gaps that need to be filled.

The next steps are to identify suitable life assurance and protection products that can meet the client's requirements, and to evaluate their features.

2.4 Life Assurance

Learning Objective

8.2.5 Know the basic principles of life assurance: types; proposers; lives assured; single and joint life policies

There are two types of cover we need to consider, namely life assurance and term assurance.

Note that in this industry, the term 'assurance' is often used interchangeably with 'insurance', although they are not the same thing: assurance usually covers the policyholder for their entire life, while insurance is designed to cover the policyholder for a specific term.

2.4.1 Basic Principles of Life Assurance

Before we look at types of life assurance, we need to consider some key terms.

Proposer	The person who proposes to enter into a contract of insurance with a life insurance company to insure themselves or another person on whose life they have insurable interest.
Life Assured	The person on whose life the contract depends is called the 'life assured'. Although the person who owns the policy and the life assured are frequently the same person, this is not necessarily the case. A policy on the life of one person, but effected and owned by someone else, is called a 'life of another' policy. A policy effected by the life assured is called an 'own life policy'.
Single Life	A single life policy pays out on the life assured's death or if some other insurable event occurs, such as if they are diagnosed with terminal illness and have critical illness cover.
Joint Life	Where cover is required for two people, this can typically be arranged in one of two ways: through a joint life policy or two single life policies. A joint life policy can be arranged so that the benefits would be paid out following the death of either the first or, if required for a specific reason, the second life assured. The majority of policies are arranged ultimately to protect financial dependants, with the sum assured or benefits being paid on the first death. With two separate single life policies, each person is covered separately. If both lives assured were to die at the same time (as the result of a car accident, for example) the full benefits would be payable on each of the policies. If one of the lives assured died, benefits would be paid for that policy, with the surviving partner having continuing cover on their life. Because the levels of cover are effectively doubled when compared to one joint life policy, the costs of two single life ones will generally be a little higher, but are unlikely to be twice as high. Therefore, using two single life policies to provide cover usually, therefore, represents good value for money.

Insurable Interest	If someone wants to buy a life insurance policy on another person's life, they must have an interest in that person remaining alive, or expect financial loss from that person's death. This is called an insurable interest.

A whole-of-life policy provides permanent cover, meaning that the sum assured will be paid whenever death occurs, as opposed to if death occurs within the term of a term assurance policy.

Technically, the term 'life assurance' should be used to refer to a whole-of-life policy that will pay out on death, while 'life insurance' should be used in the context of term policies that pay out only if death occurs within a particular period. However, these terms are not always used accurately.

2.4.2 Whole-of-Life Assurance

There are three types of whole-of-life policy:

- **Non-profit**, that is for a guaranteed sum only, where the insured sum is chosen at the outset and is fixed.
- **With-profits** which pay a guaranteed amount plus any profits made during the period between the policy being taken out and death. With-profits policies are typically used to build up a sum of money to buy an annuity or pension on retirement; to pay off the capital of a mortgage; or, in the case of whole-of-life assurance to insure against an event such as death. One advantage of with-profits schemes is that profits are locked in each year. If an investor bought shares or bonds directly, or within a unit trust or investment trust, the value of the investments could fall just as they are needed because of general declines in the stock market. With-profits schemes avoid this risk by 'smoothing' the returns.
- **Unit-linked policies** where the return will be directly related to the investment performance of the units in the insurance company's fund. Each month, premiums are used to purchase units in an investment fund.

The reason for such policies being taken out is not normally just for the insured sum itself. Often, they are bought as part of a protection planning exercise to provide a lump sum in the event of death, which might be used to pay off the principal in a mortgage or to provide funds to assist with the payment of estate taxes (eg, inheritance tax (IHT)). They can serve therefore two purposes: both protection and investment.

There is a wide range of variations on the basic life policy that are driven by mortality risk, investment, expenses and premium options, all of which impact on the structure of the policy itself. Mortality risk deals with the expected life of the person insured, whether any additional charges might be imposed, and the level of risk borne by the life company, which can affect the cost of the cover provided.

Purchasing a life assurance policy is the same as entering into any other contract. When a person completes a proposal form and submits it to an insurance company, that constitutes a part of the formal process of entering into a contract.

The principle of utmost good faith applies to insurance contracts. This places an obligation on the person seeking insurance to disclose any material facts that may affect how the insurance company may judge the risk of the contract they are entering into. Failure to disclose a material fact gives the insurance company the right to avoid paying out in the event of a claim.

Once the proposal has been accepted and the first premium paid, the insurance company will then issue a letter of acceptance and the policy document. It will be accompanied by notification of cancellation rights which allow the policyholder to cancel the policy. The policyholder will then have a stated period (say, 14 days), during which they can cancel the insurance and receive a refund for any premiums paid, less any administration fee that the insurance company may charge to cover their costs. After this period, they can still cancel, but will not receive a refund for premiums paid.

The policy may also be assigned to a bank as security for borrowing, in which case the insurance company will require the agreement of the bank before making any amendments to the policy, such as an extension or renewal.

2.4.3 Term Assurance

Term assurance is a type of policy that pays out a lump sum in the event of death occurring within a specified period.

It has a variety of uses, such as ensuring there are funds available to repay a mortgage in case someone dies or providing a lump sum that can be used to generate income for any surviving partner, or to provide funds to pay the inheritance tax when a person dies. Conversely, as term assurance has no investment element, then term assurance is not suitable for scenarios where an investment component is desired.

When taking out life cover, the individual selects the amount that they wish to be paid out if the event happens and the period that they want the cover to run for. If they die during the period when the cover is in place, then a lump sum will be paid out that equals the amount of life cover selected. With some policies, if an individual is diagnosed with a terminal illness which is expected to cause death within 12 months of the diagnosis, then the lump sum is payable at that point. Other policies may pay out on diagnosis of a critical illness, which the individual can keep even if they recover.

When selecting the amount of cover, an individual has three types to choose from: level, increasing or decreasing cover.

- **Level cover**, as the name suggests, means that the amount to be paid out if the event happens remains the same throughout the period in which the policy is in force. As a result, the premiums are fixed at the outset and do not change during the period of the policy.
- With **increasing cover**, the amount of cover and the premium increase on each anniversary of the taking out of the policy. The amount by which the cover increases will be determined at the outset and can be an amount that is the same as the change in the consumer price index (CPI), so that the cover maintains its real value after allowing for inflation. The premium paid will also increase, and the rate of increase will be determined at the start of the policy.
- As you would expect, with **decreasing cover**, the amount that is originally chosen as the sum to be paid out decreases each year. The amount by which it decreases is agreed at the outset; for example, if it is intended to be used to repay a mortgage, it will be based on the expected reduction in the outstanding mortgage that would occur if the client had a repayment mortgage. Although the amount of cover will diminish year by year, the premiums payable will remain the same throughout the policy.

The other variable that is selected when the policy is taken out is the period for which the cover will last. An individual is normally able to select a period up to 40 years, with a limit that the cover must end before their 70th birthday, although today, some policies allow coverage beyond this.

It is very important to note that policies are normally issued with cover that lasts for five years. At each five-year anniversary, the individual has the option to renew without any further underwriting and the insurance company can, equally, recalculate the premiums based on the individual's age and market conditions at the time. The client, therefore, needs to be aware that the premiums that are payable can change.

It is also important to recognise that this type of policy is not guaranteeing to repay a mortgage or loan, but instead to pay a known sum.

Where it is used to provide protection for payment of an outstanding mortgage in the event of death, it will only do so if:

- the initial amount of cover was not less than the outstanding loan
- mortgage payments are kept up to date
- the term of the mortgage has not been extended
- the period when the cover is in place is at least the same as the mortgage period
- any further mortgages are separately covered, and
- the mortgage interest rate does not exceed the one that the insurance company originally quoted for.

The latter point is particularly relevant and requires regular checks to be made to ensure that the mortgage interest rate does not go above the quoted rate, otherwise the client may have insufficient cover.

It should also be noted that life cover can be written in trust and so can be a valuable way for a client to ensure that their beneficiaries will receive a lump sum to pay; for example, the IHT that arises on their death. The policy is written in trust and if it becomes payable, then the lump sum is paid to the **trustees** of the policy and may not form part of their estate for IHT or estate taxes.

2.5 Protection Policies

Learning Objective

8.2.6 Know the main product features of: critical illness insurance; accident and sickness protection; medical insurance; long-term care protection

2.5.1 Critical Illness Insurance

Critical illness cover is designed to pay a lump sum in the event that a person suffers from any one of a wide range of critical illnesses.

Some of the key features of such policies include:

- The critical illnesses that will be covered will be closely defined.
- Some significant illnesses may be excluded.
- Illness resulting from certain activities, such as war or civil unrest, will not be covered.

Looking at how many people suffer from a major illness before they reach 65, its use and value can be readily seen. Illness may force an individual to give up work and so could cause financial hardship, to say nothing of how they will pay for specialist medical treatment or afford the additional costs that permanent disability may bring about.

Critical illness cover is normally available only up to a certain age; for example, to those aged between 18 and 64 years of age and which must end before an individual's 70th birthday. It will pay out a lump sum if an individual is diagnosed with a critical illness and will normally be tax free. The cover will then cease, and it is important to note that this can be the case even where more than one person is covered under the policy.

There will be conditions attached to the cover that determine whether any payment will be made. A standard condition applying to all illnesses covered is that the insured person must survive for 28 days after the diagnosis of a critical illness to claim the benefit, and the illness must be expected to cause death within 12 months.

There will be other conditions that have to be satisfied and, as a result, it is important to understand what illnesses are covered and the circumstances in which a claim can be made. This requires a detailed examination of the terms of a policy especially as the amount of cover needed will be significant and the premiums can be expensive.

Critical illness cover can usually be taken out on a level, decreasing or increasing cover basis (see section 2.4.3). It can often be combined with other cover such as life insurance, thus ensuring that the individual is covered for whichever occurs first: the diagnosis of a critical illness, or their death.

This type of cover can also be extended to provide for total and permanent disability to give a greater level of protection, as it will normally cover conditions and circumstances that are not included as part of the standard critical illness cover.

2.5.2 Accident and Sickness Protection

Personal accident policies are generally taken out for annual periods and can provide for income or lump sum payments in the event of an accident.

Although relatively inexpensive, care needs to be taken to look in detail at the exclusions and limits that apply. These may include:

- The amount of cover may be the lower of a set amount or a maximum percentage of the individual's gross monthly salary.
- The waiting period between when an individual becomes unable to work and when benefits start may be 30 or 60 days.

The insurance company will assess eligibility at the time of the claim and may refuse a claim as a result of pre-existing medical conditions even if they have been disclosed.

2.5.3 Medical Insurance

Private medical insurance is obviously intended to cover the cost of medical and hospital expenses. It may be taken out by individuals, or provided as part of an individual's employment.

Some of the key features of such policies include:

- The costs that will be covered are usually closely defined.
- There will be limits on what will be paid out per claim, or even over a period such as a year.
- Standard care that can be dealt with by a person's local doctor may not be included.
- Again, there will be exclusions, such as for pre-existing conditions.

2.5.4 Long-Term Care Protection

The purpose of long-term care insurance is to provide the funds that will be needed in later life to meet the cost of care. Simply considering the cost of nursing home care explains the need for such a policy, but its value to an individual will depend on the amount of state funding for care costs that will be available. Premiums will be expensive, reflecting the cost of care, and the benefit will normally be paid as an income that can be used to cover the expenditure.

2.5.5 Business Insurance Protection

Learning Objective

8.2.7 Know the main product features of business insurance protection: key person; shareholder; partnership

Business insurance protection can take many forms. Some examples of its use are to:

- provide indemnity cover for claims against the business for faulty work or goods
- protect loans that have been taken out and secured against business assets or those of the business owner
- provide an income if the owner is unable to work and the business ceases
- provide payments in the event of a key person within the business dies or is unable to work, to cover any impact on its profits, or
- provide money in the event of death of a major shareholder or partner so that the remaining shareholders can buy out their share and their estate can distribute the funds to their family.

In the following sections, we consider the key features of three of the main types of business protection policies encountered.

Key Person Protection

Key person protection involves a company insuring itself against the financial loss that it may suffer from the death or serious illness of an employee whose skill, knowledge, experience or leadership contribute to the company's continued financial success and whose death or serious illness could lead to a financial loss for the company. They may be the founder of a company, a salesperson, or a specialist who is essential to the success of a company.

The problems associated with the loss of such an individual may be either loss of profits or a loss of loan facilities.

If a company were to lose a key individual due to death or serious illness, it could suffer financially for one of a number of reasons, including:

- financial penalties due to a delay in completion of existing contracts
- banks and existing or new suppliers reviewing their credit lines
- lost sales and loss of competitive edge afforded by innovative or design expertise, or
- people issues including increased pressure on the remaining workforce to meet deadlines, impact on staff morale and recruitment costs.

Some of the above will affect the company's profitability in the short term, while others may last into the medium and longer term.

Life cover and possibly critical illness cover may need to be taken out. This will require an insurable interest to be established and, for financial underwriting purposes, the business must be able to justify the amount of cover required and demonstrate how the figure has arrived at.

The amount of cover needed can be determined in a number of ways: it can be based on a loss-of-profit calculation, a salary multiple of the key individual, the length of time it may take the company to recover, or the business loans secured on those individuals.

Shareholder Protection

With a private company, the death or serious illness of a major shareholder can have a big impact both on the future of a business itself and on their family.

Shareholder protection can protect both the company and the family by making sure that the capital is available to buy out their shares without leaving the company crippled financially.

If a major shareholder dies, then their beneficiaries inherit the shares and this could lead to tensions in the running of the company, as they may not have the necessary skills and experience to take on such a role or may not share the objectives that the surviving shareholders have for the business.

Alternatively, they may want to receive the value of the shares in cash. The **Articles of Association** will usually require that these are offered firstly to the surviving shareholders, but these shareholders may not have sufficient capital to purchase the shares. Without the necessary capital, the shares may have to be sold to an outside third party, a potential hostile bidder, or even a direct competitor.

Shareholder protection can provide cover to ensure sufficient funds are available to enable the purchase to take place. This is achieved by establishing a policy on each of the major shareholders' lives for an amount that reflects the value of their individual holdings. The policy is written under a special form of business trust so that any proceeds payable will be due to the surviving shareholders.

This approach requires the shareholders to agree to a policy at the outset that the shares will be purchased at a price that will be calculated in accordance with an agreed formula. This is then included in a double option agreement which gives each party an option to buy or to sell their holdings on death. If either party chooses to exercise their option, the other must comply.

Partnership Protection

As with a private company, the death or serious illness of a partner can have a big impact on the future of the business itself, and on the partner's family. To enable the continuity of the partnership, a partnership protection plan can be put in place that enables the surviving partners to purchase the share of the business from the deceased partner and provide the deceased partner's dependants with a willing buyer and cash instead of an interest in the business.

Other alternatives include:

- binding arrangements to buy and sell their share between the partners
- taking out a 'life of another' arrangement, although this can present issues when partners join or leave
- establishing an absolute trust, although this has the disadvantage that it can be inflexible as partners change, and
- joint life first death policies.

2.6 Selecting Protection Products

Learning Objective

8.2.8 Understand the factors to be considered when identifying suitable protection product solutions and when selecting product providers

The next steps are to identify suitable protection products that can meet the client's requirements and evaluate their features. For life assurance and protection products, the process essentially involves identifying the range of potentially suitable products, assessing the key product features against the client's needs and selecting the most suitable options.

The following factors should be considered when selecting a product:

- The **product features** will clearly need to be examined to ensure that they meet the client's objectives. They should also be checked for any additional features that may be included which may address one or more of the client's other needs, and to see if there is an option to add additional cover at preferential rates. Additionally, it is important to consider if the cover keeps up with inflation and whether the premiums will also rise with inflation.

- **Price**, or the premium that the client will pay, is an important consideration, as are the charges. These charges can range from annual management charges, to a charge for buying units in a unit-linked policy, to initial charges for set-up costs of the policy and a policy fee. If they are built into the premium, they will be of less importance, as the product chosen may be the one with the lowest premium.
- Any **charges** payable on the product should be clearly detailed in the key features document, product illustration or product brochures. These should be carefully examined and compared against comparable product offerings.
- In deciding which policy to recommend, the adviser must take into account the client's tax position. The **tax treatment** of the product and any payments made under it should be established, as this could have a material impact on the financial position of the client should they need to claim under the policy. The features of each product should be examined to see if the benefits payable under some policies can be made tax free and whether there is any advantage or drawback to its treatment.
- The **commission** paid to the adviser is usually based on the premium paid, and the adviser must ensure that they recommend the most appropriate product and not the one paying the highest commission.

2.7 Selecting Product Providers

Learning Objective

8.2.8 Understand the factors to be considered when identifying suitable protection product solutions and when selecting product providers

When the adviser has decided on the right product type to recommend, the next task is to decide on an appropriate product provider.

The features of a product may vary from provider to provider and may therefore be a determining factor, but if there are a number of providers of equally suitable products, the following should be considered:

- financial strength
- quality of service, and
- any regulatory comments or bad press (if a policy needs to be paid out, clients should not have problems with this).

2.7.1 Financial Strength

Protection is an area of insurance where the capital strength of the provider is important, and it is a vital factor to take into consideration when setting up protection cover.

Although the cost of the premiums may seem to be an immediate indication of the suitability of the policy for a client, it is important for advisers to also factor in the financial strength of the provider they are recommending. Protection policies can run for many years, so an adviser needs to be sure that the company will still be around when the customer needs to make a claim in ten- or 20-years' time. A lower premium is no help if the provider is not around.

Protection is a very capital-intensive business to write, because it requires substantial financial reserves to cover potential claims and maintain solvency. In difficult economic environments it is also an area that insurance companies will pull out of if they are struggling financially. The recent past has seen protection insurers being bought up and some providers pulling out of the protection market altogether in some countries.

An adviser needs to be aware of what might happen if a provider were to leave the market. If the provider were to go bust or stop writing business, then it is possible the policies would be transferred to a closed book specialist (ie, a company or entity that specialises in managing insurance policies that are no longer actively sold or marketed). This change of ownership could come with an adverse change in the company's approach to managing claims, as their motivation for being in the protection market will clearly be very different from those providers writing new business. It can also be less straightforward and more expensive to add to or amend cover once a client's policy has been transferred in such a way.

Worse still could be if the provider moves out of the market altogether and the client is left with no cover and needs to start a new policy with another provider. For example, for medical or critical illness cover, the client's medical position by then could be such that they will have to pay higher premiums and/or have some cover excluded for any pre-existing conditions.

There are also regulators that can help and so it is important to make sure any company is regulated. A regulator should be able to assist with any financial issues. Also, an adviser should make sure there is no negative press about a company having problems financially, especially in connection with paying out policies.

2.7.2 Quality of Service

Assessing the quality of service of a product provider is also important, and the adviser needs to look at both the servicing and claims record of the provider and their long-term commitment to the market. This can be as important as financial strength, especially with regard to life assurance. If the policyholder was to die their spouse/civil partner exercised the policy, the policyholder would want to know that the company has a good record of making sure that the policy would pay out with minimum problems or difficulties.

A reputable service provider should:

- produce documentation that is clear and understandable
- provide a hassle-free service
- have prices and rates that are clear and transparent, and
- progress medical examinations in a timely manner.

These and other indicators, including practical experience of dealing with the firm, will give an indication of the servicing quality of the firm.

The other essential feature of the service level received by a provider is how they deal with claims. The adviser will want to examine the firm's claims experience and determine whether they pay claims fairly and efficiently or put hurdles in the way of the client claiming under the policy. Establishing this can be difficult and subjective. It would be up to the adviser to determine, based on their own experiences or those of other advisory firms with which they network.

2.8 Presenting Recommendations

Learning Objective

8.2.9 Know the elements to be included in a recommendation report to clients

We are now close to the end stages of the planning process.

In this final section, we look at how these recommendations should be presented to the client.

Presenting the information in a clear and understandable manner is essential if the client is to understand the advice being given and is an important part of the process of giving financial advice. This is normally achieved by preparation of a formal written report, which can put the products recommended into the context of the client's circumstances and objectives.

There is no single correct way to construct a report, but its likely contents are:

- date of report
- an introduction that explains the content of the report
- the current position of the client limited to the most important aspects and a summary of their current protection arrangements
- the objectives and priorities that have been agreed with the client
- the recommendations that are being made, how they relate to the client's objectives and priorities, and an explanation of the choice of provider
- considerations that have been deferred until later
- any tax implications of the recommendations on the client's position, and
- the action needed to implement the requirements.

It will also be accompanied by appropriate product quotations, illustrations and brochures.

The report may, be part of a holistic view of the client's position, and therefore, include investment and retirement recommendations as well as protection.

Providing a written report is clearly an important way of recording what has been recommended and the key information on which it has been based and should thus avoid the potential for misunderstandings and act as a safeguard for the adviser.

Key Features Documents (KFDs)

It is a key feature of regulatory rules that the advice given to clients is suitable and that clients should have the information made available to them to make an informed decision.

One way in which this can be achieved is by the provision of key features documents (KFDs), which describe the product in a way that a client can understand.

A KFD will be provided to the client as part of the product illustrations and should contain the following information:

- a clear description of the aims of the product
- the commitment that the client will be making
- the risks involved in the product with a description of the factors which may have an adverse effect on performance or are otherwise material to the client's decision, and
- a question and answer section on the main terms of the product. This should provide the principal terms of the product and any other information necessary to enable a customer to make an informed decision. It will include the charges to be made.

A well-drafted KFD will aid the client in understanding the recommendations that have been made and the commitments they are entering into, and will generally help in the overall planning process. The adviser needs to recognise, however, that not all KFDs are written in a style that is succinct, clear and understandable – where that is the case, they should assist the client with their understanding so that they can make an informed decision.

Cancellation Rights

An important feature of many financial services products is the right of the client to change their mind and cancel, or withdraw from, the arrangement without meeting charges. It is important that the adviser fully explains these rights and any associated documentation to the client.

3. Estate Planning, Trusts and Foundations

3.1 Estate Planning

Learning Objective

8.3.1 Understand the key concepts in estate planning: assessment of the estate; power of attorney; execution of a will; inheritance tax; life assurance

Estate planning is concerned with ensuring that a client takes appropriate steps to ensure that their accumulated wealth passes to their intended beneficiaries, and in a tax-efficient way.

Estate planning can be a complex subject but essentially involves determining who is to inherit the assets of the client and which steps can be taken to reduce any estate taxes that will arise on death.

The steps that can be taken vary significantly from country to country. Some jurisdictions allow complete freedom over to whom an individual can leave their estate, while in others, certain people will have a right to a specific share of the estate.

3.1.1 Assessing a Client's Estate

A key first step in estate planning is to assess the extent of a client's assets and liabilities.

These include their property, their savings and any investments, but it is also necessary to identify any other funds that would become payable if the client were to die, such as the proceeds of any life assurance policies or payment of death benefits if the client is still working. The assessment of a client's liabilities should also take account of any protection policies that may be in place to meet that liability, such as a mortgage protection policy.

Once identified, these can then usefully be summarised into a balance sheet. This balance sheet can then be used to direct the client to consider three key areas:

- Whether they need to execute a power of attorney (PoA) to protect their interests when they are incapable of managing their affairs – see section 3.1.2.
- Whom they wish to inherit their estate and whether there are any specific gifts they wish to make.
- The extent of any liability to IHT or estate duties that may arise, and whether action should be taken to mitigate this.

3.1.2 Powers of Attorney (PoA)

A power of attorney is a legal document that a client executes to authorise someone else to undertake a specific transaction or in order for someone to manage their affairs.

For example, in terms of their financial affairs, a client may hold a range of investments in their own name, or may have appointed a firm to manage their investment portfolio. Consideration needs to be given to what would happen if the client became incapable of managing their affairs.

An individual can execute a PoA during their lifetime while they are of sound mind and appoint someone to carry out certain activities. When they are no longer of a sound mind (*non compos mentis*), their authority to continue to act ceases and that person will need to apply to the courts to be appointed as a receiver.

Some countries have more complex elaborations on this basic principle, which the adviser should be aware of. For example, in the UK, an individual can execute what is known as a lasting PoA (LPA). There are two types of LPA:

- A property and financial affairs LPA will appoint someone to manage their financial affairs in the event that they can no longer do so.
- A health and welfare LPA to appoint an attorney to make decisions about their personal healthcare and welfare, including decisions to give or refuse consent to medical treatment. Once the individual loses their mental capacity, the attorney needs only to register the LPA with the courts before they can legally use it.

It is essential to appreciate that the authority given to the adviser or investment firm to act on behalf of the client can continue only so long as the client can change their mind and cancel any contract or agreement.

Once an individual becomes incapable of managing their own affairs, the authority to act ceases and alternative arrangements need to be made (this principle extends beyond investment management services to everyday financial products, such as bank accounts). Someone else will need to be appointed to act on their behalf – this may be either a member of the family or a lawyer, for example. How they are appointed will depend upon whether the individual makes arrangements in advance or not, but either way, there is a series of rules and legal procedures that have to be followed. An individual may become incapable of managing their affairs and have made no arrangements for what is to happen in that event. If that occurs, someone else will need to apply to the courts to have authority to act. That person is known as a receiver or an attorney, and the person whose affairs they are looking after is referred to as the client or donor.

From the point of view of adviser or investment firm, an attorney who is authorised to give instructions will need to be appointed urgently. In practice, this is a difficult area for a firm which may need to take urgent action whilst an attorney is appointed and, if they do so, risk the attorney subsequently refusing to accept their decision. However, the firm still has a duty to manage the investments as per the existing mandate (although problems can arise in relation to signing off on suitability).

3.1.3 Execution of a Will

A will is a legal document that tells the world what is to happen to an individual's assets. Where possible, the client should make a will in order to ensure that the assets of their estate pass in accordance with their wishes, and should take specialist advice so that relevant laws are taken account of.

A will is generally regarded as essential for everyone, but particularly so in the case of a family with young children and in cases of second marriage. A family with young children needs to consider what would happen to the children if their parents were unfortunate enough to be involved in a fatal accident. Who would look after the children, who would invest any money until they came of age and what would happen if the child needed some essential expenditure such as the payment of school fees? A properly drafted will should ensure that all of these points are provided for. In cases of second marriage, the partners may wish their assets to be split in precise ways on the death of the survivor, and again a carefully drafted will can achieve this.

If overseas assets are held, especially property, then separate wills should be made in each country. Generally, this should be drafted by a specialist in the jurisdiction in question. Care also needs to be taken that wills in each country are not contradictory to one another (both in terms of substance and applicable laws) – therefore, it is important that appropriate legal advice is sought not only on local level, but also in terms of how various wills interact with each other, in terms of potential conflict of provisions, time sequence and potential conflicts of applicable laws.

If no will has been made, the legal system will determine who inherits. When a person dies without leaving a will, they are described as having died intestate and a set of intestacy rules will determine who is to inherit. These may well provide for the estate to pass in a way that the client would not have intended.

In some jurisdictions, it is not possible to make a will. Where that is the case, consideration may be given to an offshore trust (see section 3.2.4).

3.1.4 Estate Taxes

Having prepared a balance sheet detailing the client's assets and liabilities, an adviser should be in a position to estimate how much estate tax might be payable. In many countries, tax is imposed on the assets that someone owns and the tax due may arise during their lifetime or on death. In others, the tax is based on the heirs rather than the estate. These types of taxes go by various names such as death duties, estate taxes, gifts tax, inheritance tax (IHT) or wealth tax. These maybe separate taxes or combined into one charge.

In most countries, there are exemptions and allowances that can be taken advantage of to mitigate the eventual inheritance taxes that might be due. When a will is drafted, it will specify who the client wishes to inherit their estate, but careful consideration should also be given to drafting it in such a way as to maximise the use of exemptions and allowances.

The liability to some form of estate taxes usually depends upon the domicile of the individual and the location of the assets they own. It is important that wealth managers who are dealing with clients from another country have an understanding as to how these taxes operate as this may impact the arrangements they put in place for their client and as an inappropriate arrangement can lead to an unintended tax liability.

3.1.5 The Role of Life Assurance in Estate Planning

It may be possible to reduce estate taxes by a well drafted will and by decreasing the size of an estate by making gifts during lifetime but, inevitably, it is usually not possible to avoid this altogether and life assurance may then have a role to play.

It is possible to take out protection products, sometimes known as IHT policies, that are specifically designed to help the client achieve their aim. Typically, these products involve the client paying premiums on a policy that is set up in such a way that the policies are payable directly to the beneficiaries and do not form part of the estate and therefore not subject to estate tax. While the estate taxes are still payable, the client has ensured that the intended beneficiaries receive a lump sum payment that can compensate for the amount paid out.

It is also possible, depending upon local laws, for a client to take out, say, a life assurance policy or investment bond and invest significant amounts and then similarly write it in such a way that it passes directly to the beneficiaries and avoids any estate taxes. This usually involves the use of a trust.

These arrangements or gifts usually have to be made a number of years before the client dies to be able to achieve the benefit. The value of any protection plan proceeds not written in trust must be added to the life assured's estate and may be subject to estate taxes.

3.2 Family Investment Vehicles

Learning Objective

8.3.2 Know the uses of family investment vehicles: trusts and the types of trust available; offshore trusts; offshore foundations; investment companies

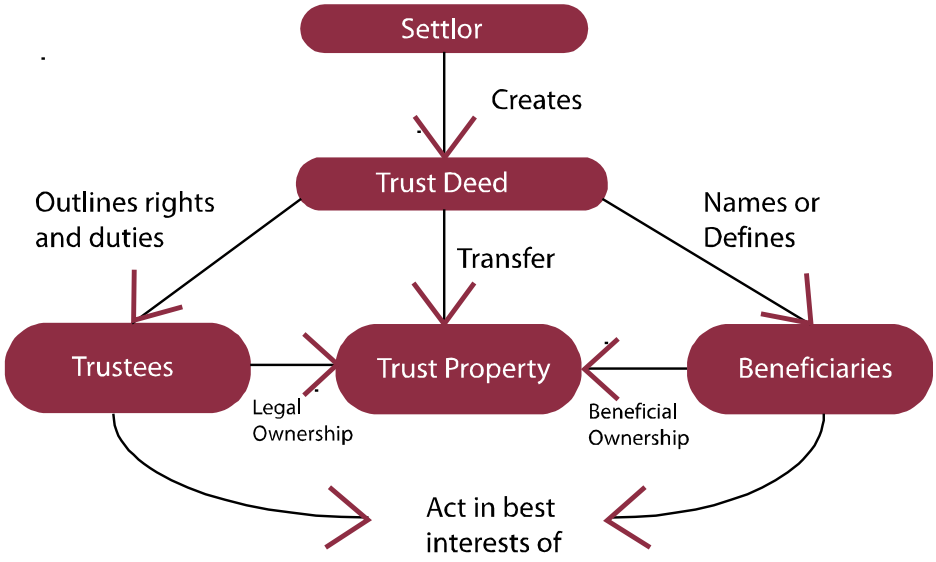
There are a number of arrangements that can be conveniently grouped under the term family investment vehicles, such as trusts and foundations, each of which can be used to manage family wealth.

3.2.1 Trusts

Trusts are based on an English law concept and developed from the early Middle Ages onwards as a way of preserving wealth and passing on assets on death in a controlled way. Their use has expanded internationally over the years, and they tend to be a feature of countries that have common law systems. However, they are not exclusively found in common law jurisdictions.

While trusts serve financial planning purposes, in some jurisdictions they are generally not used in this capacity (if at all).

A trust is the legal means by which one person gives property to another person to look after on behalf of yet another individual or a set of individuals. The following diagram illustrates the parties and key features of a trust.



The key components of a trust are described in the following table:

Settlor	• The **settlor** is the person who creates the trust and who passes ownership of their assets to the trustees.
Trust Deed	• A trust is created by a legal document which will contain provisions detailing its terms, the duties and powers of the trustees and the beneficiaries who will benefit under the trust. The legal document may be either a separate trust deed or it may be contained in someone's will.
Trustees	• The trustees are usually appointed in the trust document itself and it will usually contain the power to appoint further trustees as and when required. • The trustees hold the assets that are transferred to them and manage these assets in accordance with the terms of the trust and on behalf of the beneficiaries. The trustees have legal ownership of the assets, but must act in the best interests of the beneficiaries. • Their powers to act are set out in legislation and the trust deed.
Trust Protector	• A trust protector may be appointed to protect the interests of the beneficiaries. • The types of powers typically given to the protector would include requiring their consent before certain transactions can be carried out or to enable them to direct the trustees in certain matters, including the power to dismiss the trustees and appoint new ones.
Beneficiaries	• The trust deed will identify who the initial beneficiaries are or specify a class from which the beneficiaries may be drawn. Beneficiaries may include the settlor, the spouse, children, grandchildren, any future children not yet born, or any other parties the settlor may propose.

A trust is essentially a legal vehicle into which assets are transferred and which is then managed by the trustees, who have a responsibility to hold and apply the assets for the benefit of the named beneficiaries.

3.2.2 Uses of Trusts

Trusts have a variety of uses. Some of the main reasons they are deployed are as follows:

- **Estate planning** – as an alternative to passing assets by a will; a trust can give greater flexibility as to the timing and terms under which assets are distributed.
- **Asset preservation** – as a way of preserving the family fortune.
- **Business preservation** – as a way to ensure the continuation of family businesses.
- **Asset protection** – to protect assets against the claims of others.
- **Family protection** – to safeguard the interests of young children or disable individuals, including the provision of education and care, ensuring their interests are protected and that they receive funds at the appropriate time.

- **Tax planning** – to reduce future IHT liabilities by transferring assets into a trust, and so out of the settlor's ownership.
- **Charitable giving** – as a way of ensuring certain charitable objectives are met.

3.2.3 Types of Trusts

One of the advantages of a trust is its flexibility and it is possible to create a wide range of trusts with different characteristics. Trusts come in a variety of forms, but some of the main ones that will be encountered are as follows:

Bare Trusts

A bare trust, or an absolute trust, is where a trustee holds assets for, usually, a single beneficiary (although they may have more than one). However, the beneficiaries have the right to all of the capital and income of the trust at any time once they reach a certain age (eg, 18 in England and Wales, and 16 in Scotland) and have full mental capacity. The beneficiaries who hold the whole of the equitable interest may call for the legal interest from the trustee which will give them absolute ownership property held in trust, and therefore end the trust.

Bare trusts are particularly useful for grandparents who wish to pass on assets to their grandchildren or set aside money for their school fees or university education. The named beneficiaries have an 'absolute entitlement' to the assets that are placed in trust, but they will be held in the name of the trustee until the children become entitled to the trust assets. This could be useful for settling assets that the beneficiaries could not hold directly, eg, stocks and shares (because minors cannot contract to buy and sell them).

Interest in Possession Trusts (IIP)

Also known as a life interest trust or a fixed interest trust, this is where a beneficiary has a right to the income of the trust during their life (life tenant) but the capital passes to another (remainderman) on their death. Thus, an interest in possession trust can provide a person with a right to enjoyment of assets during their lifetime with no absolute right to the capital or the assets; instead, the trust can provide that this capital passes on to someone else after that person's death.

IIPs are sometimes established in a will, and are a potentially useful way of providing a safe income for dependants of the settlor, while ensuring that some assets are saved to be passed on at a later date.

Example

Mr A owns a house and creates a trust transferring the house to Mr B and Ms C as trustees. The terms of the trust are that A's daughter D has the right to live in the house and, on her death, absolute title to the house is to be transferred to her daughter, E (the remainderman – who receives the principal remaining in a trust account after all other required payments have been made). The trust does not produce income, but D has the right to enjoy the trust property and is known as the life tenant.

Accumulation Trusts

Trustees can accumulate income within the trust and add it to the trust's capital, often until the beneficiary becomes legally entitled to the trust assets or the income produced from them. They can also pay income out, as with discretionary trusts. (These are not to be confused with the old accumulation and maintenance trusts, a special type of discretionary trust intended to make provisions for children and young adults until they reached the age of 25, that stopped in 2006.)

Discretionary Trusts

With discretionary trusts, the trustees have discretion over to whom the capital and income are paid, within certain criteria.

The settlor is allowed to select a list of discretionary beneficiaries when establishing a trust, and beneficiaries can change over the lifetime of the trust. The discretionary beneficiaries have no immediate interest in the trust; rather, they receive proceeds of the trust at the discretion of the trustees.

An individual may want to retain flexibility as to who will benefit under a trust, so that future children or grandchildren who have not yet been born can be included, or for many other reasons. A discretionary trust can provide for the distribution of the capital or income among a wide class of persons, with the settlor giving the trustees discretion as to both the timing of any distributions and who is to benefit.

A special type of discretionary trust, accumulation and maintenance (A&M) trusts are often used for the education and general benefit of children or grandchildren. It is no longer possible to set up new A&M trusts, but some still exist.

3.2.4 Offshore Trusts

The use of an offshore trust for tax planning and asset protection purposes is a popular method used by wealthy individuals as part of their overall tax planning strategy.

Discretionary offshore trusts, otherwise known as offshore asset protection trusts, are the main type of trust structure used, as they can provide privacy, security and flexibility. They are complex structures that require specialist advice both for their creation and their ongoing management. They are usually established in a tax haven or in a low-tax jurisdiction, such as the Bahamas, Gibraltar, Liechtenstein, the Isle of Man and Jersey and Guernsey. These traditional centres are now being followed by centres such as Bahrain and Dubai, which are aiming to become the most important, influential and successful offshore and international financial centres in the Middle East.

The trustee of an offshore trust is generally a trust company.

Whilst the reason for an offshore trust being established will vary from case to case, there are a number of common reasons why they are used:

- **Privacy** – offshore trusts may not be publicly registered and depending on the jurisdiction where the trust is established, the settlor may be able to give assets to a trust anonymously. This can enable someone to dissociate themselves from assets for the purposes of tax reduction or to remain anonymous for personal or business protection purposes. Further, a trust will normally be more confidential than the provisions of a will (which ultimately becomes a matter of public record), some

jurisdictions are tightening regulations for the purposes of tackling money laundering. For example, since 2017, trustees and personal representatives of certain types of trust have been obliged – under the UK's Money Laundering and Terrorist Financing (Amendment) Regulations 2019 – to report information to the Trusts Registration Service (TRS), a government online register. This requirement applies to all UK trusts, as well as trusts outside the UK that trigger UK tax. While the register was initially not publicly available, since 2020 it has been partially opened to the public, thus raising concerns about the erosion of privacy for hundreds of thousands of trustees and beneficiaries. This, alongside reduced tax advantages over the past few decades, could make trusts a less attractive tool for financial planning purposes.

- **Protection** – offshore trusts can protect assets and wealth from the threat of taxation or against the risk of litigation.
- **Inheritance** – in certain countries, the law dictates to whom a person may leave their assets on death, and so offshore trusts can be used to ensure that wealth is transferred in accordance with the settlor's wishes and not in accordance with the laws of the country where they live or are domiciled.
- **Flexibility** – offshore trusts can be designed to meet specific personal or family requirements such as protecting the future of certain family members who may be less capable of managing their own affairs.
- **Efficiency** – offshore trusts can be used to centralise the management of assets owned throughout the world in one location.
- **Legal certainty** – offshore trusts are recognised in all common law jurisdictions and receive increasing recognition in important civil law jurisdictions as well.
- **Tax planning** – offshore trusts are an important tool when it comes to international income, capital gains and inheritance tax planning and, as long as certain conditions are met, will not be liable to any local taxes.
- **Financial security** – offshore trusts can help safeguard assets and wealth against political and economic uncertainty in the settlor's home country.

Offshore financial centres have traditionally been associated with low or minimal tax rates and with attempts by individuals and companies to minimise their tax liabilities by exploiting tax laws. In recent times, the public and political mood on the acceptability of this has changed and governments are increasingly tackling all forms of tax evasion and tax avoidance.

3.2.5 Offshore Foundations

Foundations are similar to trusts and originated in civil law jurisdictions, but are also now available in some common law jurisdictions as an alternative to a trust.

A foundation is an incorporated entity with separate legal personality but, unlike a company, it does not have shareholders. Instead, it holds assets in its own name on behalf of beneficiaries or for particular purposes and it operates in accordance with a constitution comprising of a charter and a set of rules.

Once incorporated, a foundation will act through its council which will govern the foundation in accordance with the terms of the foundation's constitution. The council members perform much the same role as trustees.

As with trusts, foundations can have multiple uses for private, charitable and corporate purposes and can be incorporated into a variety of potential structures tailored to best suit a particular client's needs.

Uses of Foundations	
Private	• Foundations may be particularly attractive as a simple alternative to trusts for clients, especially from civil law jurisdictions, for whom the concept of a trust may be unfamiliar. • They can be used to achieve much the same ends as a private trust and are highly flexible in respect of how long it lasts, how the founder may remain involved in the administration and how much information the beneficiaries are entitled to. • As with trusts, provided they are appropriately drafted, the foundation may also be a suitable vehicle for asset protection as it divorces the ownership of the assets from the founder. • It can also be used as part of a larger wealth management structure holding various companies or assets or can hold more high-risk, less income-producing assets which may not be appropriate to be held by all trusts.
Charitable	• The term 'foundation' has positive connotations for philanthropic clients. • Its purposes do not have to be exclusively charitable and so can be more flexible than the traditional charitable trust.

3.2.5 Investment Vehicles

Private trust companies can be created and used by wealthy clients as a way of managing large family businesses that professional trustees might find difficult. A private trust foundation can also be used to achieve the same purpose.

In this arrangement, instead of the family business being owned by a trust, additional layers are created in the structure:

- A trust will hold the family business as its asset.
- A private trust company is created to act as trustee of the family trust.
- The private trust company is a limited company and the board of the company can be selected to ensure that there are suitably qualified advisers appointed who understand the nature of the business along with the settlor.
- Whilst the settlor could own the shares in the private trust company directly, it would probably be undesirable to have any direct link with its ownership, whether for tax, disclosure or for a variety of other reasons. Instead, a non-charitable purpose trust is created which holds the shares in a private trust company as its sole asset.

Private trust companies and private trust foundations are used for owning and administering the assets of wealthy families and are favoured because it enables the board of directors to be suitably qualified and addresses the concerns of the trustees over their potential liability.

End of Chapter Questions

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

1. **What is the main difference between a defined benefit (DB) scheme and a defined contribution (DC) scheme?**
   Answer reference: Sections 1.3.1

2. **What information is needed from a client to be able to assess what strategy they should adopt to prepare for retirement?**
   Answer reference: Section 1.4

3. **What factors should be taken into account when reviewing a client's existing protection products?**
   Answer reference: Section 2.3.1

4. **What types of cover are available under term assurance?**
   Answer reference: Section 2.4.3

5. **What are the typical conditions and restrictions attached to accident and sickness protection products?**
   Answer reference: Section 2.5.2

6. **What factors should be considered when selecting protection products?**
   Answer reference: Section 2.6

7. **Why is financial strength relevant when selecting a product provider?**
   Answer reference: Section 2.7.1

8. **Having assessed the extent of a client's assets, which three areas should be considered as part of estate planning?**
   Answer reference: Section 3.1.1

9. **What role might a life assurance policy play in estate planning for a client?**
   Answer reference: Section 3.1.5

10. **Why might an offshore trust be used?**
    Answer reference: Section 3.2.4

Glossary

This glossary explains many of the terms used in this workbook, along with a number of others that may be needed for reference purposes.

Active Management

An investment approach employed to exploit pricing anomalies in those securities markets that are believed to be subject to mispricing, by utilising fundamental and/or technical analysis to assist in the forecasting of future events and the timing of purchases and sales of securities.

Active Risk

The risk that arises from holding securities in an actively managed portfolio in different proportions from their weighting in a benchmark index.

Aggregate Demand

The total demand for goods and services within an economy.

Alpha

The return from a security or a portfolio in excess of a risk-adjusted benchmark return. Also known as Jensen's alpha.

Alternative Investments

Investments which fall outside the traditional asset classes of equities, property, fixed interest, cash and money market instruments. They offer an alternative risk and return profile to the more traditional asset classes.

Amortisation

The depreciation charge applied in company accounts against capitalised intangible assets.

Annual Equivalent Rate (AER)

See Effective Rate.

Annual General Meetings (AGMs)

The annual meeting of directors and ordinary shareholders of a company. All companies are obliged to hold an AGM at which the shareholders receive the company's report and accounts and have the opportunity to vote on the appointment of the company's directors and auditors and the payment of a final dividend recommended by the directors.

Annuity

An investment that provides a series of prespecified periodic payments over a specific term or until the occurrence of a prespecified event (eg, death).

Arbitrage

The process of deriving a risk-free profit by simultaneously buying and selling the same asset in two related markets where a pricing anomaly exists.

Arithmetic Mean

A measure of central tendency established by summing the observed values in a data distribution and dividing this sum by the number of observations. The arithmetic mean takes account of every value in the distribution.

Articles of Association

The legal document which sets out the internal constitution of a company. Included within the Articles will be details of shareholder voting rights and company borrowing powers.

Asset Allocation

The process of investing an international portfolio's assets geographically and between asset classes before deciding upon sector and stock selection.

Authorisation

Required status for firms that want to provide financial services.

Authorised Corporate Director (ACD)

Fund manager for an open-ended investment company (OEIC).

Balance of Payments

A summary of all the transactions between a country and the rest of the world. The difference between a country's imports and exports.

Bank of England (BoE)

The UK's central bank. Implements economic policy (decided by the Treasury) and determines interest rates.

Base Currency

This is the first currency quoted in a currency pair on the FX (foreign exchange) markets. For example, for the USD/JPY quote, the base currency would be the dollar.

Basis

The difference between the futures price and the price of the underlying asset.

Bear Market

A decline in a securities market. The duration of the market move is less relevant.

Bearer Securities

Those whose ownership is evidenced by the mere possession of a certificate. Ownership can, therefore, pass from hand to hand without any formalities.

Beneficiaries

The beneficial owners of trust property.

Beta

The covariance between the returns from a security and those of the market relative to the variance of returns from the market.

Bid Price

The price at which dealers buy stock.

Bonds

Interest-bearing securities which entitle holders to annual interest and repayment at maturity. Commonly issued by both companies and governments.

Bonus Issue

The free issue of new ordinary shares to a company's ordinary shareholders in proportion to their existing shareholdings through the conversion, or capitalisation, of the company's reserves. By proportionately reducing the market value of each existing share, a bonus issue makes the shares more marketable. Also known as a capitalisation issue or scrip issue.

Broker-Dealer

A stock exchange member firm that can act in a dual capacity both as a broker acting on behalf of clients and as a dealer dealing in securities on their own account.

Bull Market

A rising securities market. The duration of the market move is immaterial.

Call Option

An option that confers a right on the holder to buy a specified amount of an asset at a prespecified price on or sometimes before a prespecified date.

Capital Gains Tax (CGT)

Tax payable by individuals on profit made on the disposal of certain assets, held outside a tax-exempt wrapper.

Central Bank

Those public institutions that operate at the heart of a nation's financial system. Central banks typically have responsibility for setting a nation's or a region's short-term interest rate, controlling the money supply, acting as banker and lender of last resort to the banking system and managing the national debt. They increasingly implement their policies independently of government control.

Certificated

Ownership designated by certificate.

Certificates of Deposit (CDs)

Certificates issued by a bank as evidence that interest-bearing funds have been deposited with it. CDs are traded within the money market.

Challenger Bank

A relatively small retail bank set up with the intention of competing for business with large, long-established national banks.

Clean Price

The quoted price of a bond. The clean price excludes accrued interest or interest to be deducted, as appropriate.

Closed-Ended

Organisations such as companies which are a fixed size as determined by their share capital. Commonly used to distinguish investment trusts (closed-ended) from unit trusts and OEICs (open-ended).

Closing Out

The process of terminating an open position in a futures contract by entering into an equal and opposite transaction to that originally undertaken.

Commercial Paper (CP)

Unsecured bearer securities issued at a discount to par by public limited companies (plcs) with a full stock exchange listing. Commercial paper does not pay coupons but is redeemed at par.

Commission

Charges for acting as agent or broker.

Commodity

Items including sugar, wheat, oil and copper. Derivatives of commodities are traded on exchanges (eg, oil futures on ICE Futures Europe).

Complementary

A good is a complement for another if a rise in the price of one results in a decrease in demand for the other. Complementary goods are typically purchased in conjunction with one another.

Consumer Price Index (CPI)

A measure of the changes in the price level of a basket of goods and services purchased by households.

Contract

A standard unit of trading in derivatives.

Convertible Bonds

Bonds issued with a right to convert into either another of the issuer's bonds or, if issued by a company, the company's equity, both on prespecified terms.

Convertible Preference Shares

Preference shares issued with a right to convert into the issuing company's equity on prespecified terms.

Corporate Governance

This refers to the way in which companies are governed, to what purpose, identifies who has power and accountability, and who makes decisions. It is, in essence, a toolkit that enables management and the board to deal more effectively with the challenges of running a company. It ensures there are appropriate decision-making processes and controls in place so that the interests of all stakeholders (shareholders, employees, suppliers, customers and the community) are balanced.

Correlation

The degree of co-movement between two variables determined through regression analysis and quantified by the correlation coefficient. Correlation does not prove that a cause-and-effect or, indeed, a steady relationship exists between two variables, as correlations can arise from pure chance.

Coupon

The predetermined rate of interest applying to a bond over its term, expressed as a percentage of the bond's nominal (or par or face) value. The coupon is usually a fixed rate of interest.

Covariance

The correlation coefficient between two variables multiplied by their individual standard deviations.

Credit Creation

Expansion of loans, which increases the money supply.

Cross Elasticity of Demand (XED)

The effect of a small percentage change in the price of a complement or substitute good on a complement or substitute.

Delivery versus Payment (DvP)

Settlement process used for the settlement of stock market trades where stock and cash are simultaneously and irrevocably exchanged to settle a transaction.

Demand Curve

The depiction of the quantity of a particular good or service consumers will buy at a given price. Plotted against price on the vertical axis and quantity on the horizontal axis, a demand curve slopes downwards from left to right.

Dematerialised (Form)

A system where securities are held electronically without certificates.

Demutualisation

The process by which mutually owned financial institutions become publicly owned by obtaining a stock market listing.

Depreciation charge

The charge applied in a company's accounts against its tangible fixed assets to reflect the usage of these assets over the accounting period.

Derivative

An instrument whose value is based on the price of an underlying asset. Derivatives can be based on both financial and commodity assets.

Dirty Price

The price of a bond including any interest that has accrued since issue of the most recent coupon payment. This can be compared with the clean price, which is the price of a bond excluding the accrued interest.

Discount

The difference in the spot and forward exchange rate that arises when interest rates in the quoted currency are higher than those in the base currency.

Discount Rate

The rate of interest used to establish the present value of a sum of money receivable in the future.

Diversification

An investment strategy of spreading risk by investing in a range of investments.

Dividend

The distribution of a proportion of a company's distributable profit to its shareholders.

Dividend Yield

The total dividends paid over the year as a percentage of the current share price.

Dow Jones Industrial Average (DJIA)

The major share index in the US, based on the share prices of 30 leading American companies.

Dual Pricing

A system in which a unit trust manager quotes two prices at which investors can sell and buy.

Duration

The weighted average time, expressed in years, for the present value of a bond's cash flows to be received. Also known as Macaulay Duration.

Economic Cycle

The course an economy conventionally takes as economic growth fluctuates over time. Also known as the business cycle.

Economic Growth

The growth of gross domestic product (GDP) or gross national product (GNP) expressed in real terms, usually over the course of a calendar year. Often used as a barometer of an economy's health.

Economies of Scale

The resulting reduction in a firm's unit costs as the firm's productive capacity and output increases. Economies of scale are maximised and unit costs minimised at the minimum efficient scale (MES) on a firm's long-term average total cost (LTATC) curve. Beyond this point, diseconomies of scale set in.

Effective Rate

The annualised compound rate of interest applied to a cash deposit. Also known as annual equivalent rate (AER).

Efficient Frontier

A convex curve used in modern portfolio theory that represents those efficient portfolios that offer the maximum expected return for any given level of risk.

Efficient Market Hypothesis (EMH)

The proposition that everything that is publicly known about a particular stock or market should be instantaneously reflected in its price. As a result of active portfolio managers and other investment professionals exhaustively researching those securities traded in developed markets, the EMH argues that share prices move randomly and independently of past trends, in response to fresh information, which itself is released at random.

Equilibrium

A condition that describes a market in perfect balance, where demand is equal to supply.

Equity

That which confers a direct stake in a company's fortunes. Also known as a company's ordinary share capital.

Estate Tax

A tax on the value of a person's estate when they die – for example, inheritance tax (IHT).

Exchange

A marketplace for trading investments.

Exchange Rate

The rate at which one currency can be exchanged for another.

Ex-Dividend (XD)

The period during which the purchase of shares or bonds (on which a dividend or coupon payment has been declared) does not entitle the new holder to this next dividend or interest payment.

Exercise Price

The price at which the right conferred by an option can be exercised by the holder against the writer.

Fair Value

The theoretical price of a futures contract.

Fiat Currency

Currency that has no intrinsic value, but which is demanded for what it can itself purchase.

Financial Crime

Crimes against property, where someone takes money or property, or uses them in an illicit manner, with the intent to gain a benefit from it.

Financial Gearing

The ratio of debt to equity employed by a company within its capital structure.

Fiscal Policy

The use of government spending, taxation and borrowing policies to either boost or restrain domestic demand in the economy so as to maintain full employment and price stability. Also known as stabilisation policy.

Fixed-Interest Security

A tradeable, negotiable debt instrument, issued by a borrower for a fixed term, during which a regular and predetermined fixed rate of interest based upon a nominal value is paid to the holder until it is redeemed, and the principal is repaid. However, there are some debt instruments (such as zero coupon bonds and discounted bonds), that do not pay a regular income; instead, they are issued at a discount to the eventual par value.

Flat Yield

See Running Yield.

Floating Rate Notes (FRNs)

Debt securities issued with a coupon, periodically referenced to a benchmark interest rate.

Forex, or FX

Abbreviation for foreign exchange trading.

Forward

A derivatives contract that creates a legally binding obligation between two parties for one to buy and the other to sell a prespecified amount of an asset at a prespecified price on a pre-specified future date. As individually negotiated contracts, forwards are not traded on a derivatives exchange.

Forward Exchange Rate

An exchange rate set today, embodied in a forward contract, that will apply to a foreign exchange transaction at some prespecified point in the future.

Forward Rate

The implied annual compound rate of interest that links one spot rate to another, assuming no interest payments are made over the investment period.

Frequency Distribution

Data either presented in tabulated form or diagrammatically, whether in ascending or descending order, where the observed frequency of occurrence is assigned to either individual values or groups of values within the distribution.

FTSE 100

The main UK share index of 100 leading shares (pronounced 'Footsie').

Fund Manager

A firm or person that invests money on behalf of clients.

Fund of Funds (FoFs)

A multi-manager fund. It has one overall manager that invests in a portfolio of other existing investment funds and seeks to harness the best manager talent available within a diversified portfolio.

Fundamental Analysis

The calculation and interpretation of yields, ratios and discounted cash flows (DCFs) that seek to establish the intrinsic value of a security or the correct valuation of the broader market. The use of fundamental analysis is nullified by the semi-strong form of the efficient market hypothesis (EMH).

Future

A derivatives contract that creates a legally binding obligation between two parties for one to buy and the other to sell a prespecified amount of an asset on a prespecified future date at a price agreed today. Futures contracts differ from forward contracts in that their contract specification is standardised so that they may be traded on a derivatives exchange.

Future Value

The accumulated value of a sum of money invested today at a known rate of interest over a specific term.

Geometric Mean

A measure of central tendency established by taking the nth root of the product (multiplication) of n values.

Geometric Progression

The product (multiplication) of n values.

Gross Domestic Product (GDP)

A measure of the level of activity within an economy. More precisely, GDP is the total market value of all final goods and services produced domestically in an economy typically during a calendar year.

Gross National Product (GNP)

Gross domestic product (GDP), adjusted for income earned by residents from overseas investments, and income earned in the country by foreign investors.

Gross Redemption Yield (GRY)

The annual compound return from holding a bond to maturity, taking into account both interest payments and any capital gain or loss at maturity. Also known as the yield to maturity (YTM).

Hedging

A technique employed to reduce the impact of adverse price movements in financial assets held, typically by using derivatives.

Holder

An investor who buys put or call options.

Immunisation

Passive bond management techniques that comprise cash matching and duration-based immunisation.

Income Elasticity of Demand (YED)

The effect of a small percentage change in income on the quantity of a good demanded.

Independent Financial Adviser (IFA)

A financial adviser who is not tied to the products of any one product provider and is duty-bound to give clients best advice. IFAs must establish the financial planning needs of their clients through a personal fact-find and satisfy these needs with the most appropriate products offered in the marketplace. If the financial adviser is not independent, they are classified as 'restricted'.

Index

A single number that summarises the collective movement of certain variables at a point in time in relation to their average value on a base date or a single variable in relation to its base date value.

Inflation

The rate of change in the general price level or the erosion in the purchasing power of money.

Initial Public Offering (IPO)

See New Issue.

Insider Dealing

A criminal offence by people with unpublished price-sensitive information who deal, advise others to deal or pass the information on.

Integration

The third stage of money laundering, when the money from criminal or terrorist activities forms part of the legitimate financial system and has been 'cleaned'. Hence, it is very hard to now tell if this money is from illegitimate or criminal sources.

Internal Rate of Return (IRR)

The discount rate that, when applied to a series of cash flows, produces a Net Present Value (NPV) of zero. Also known as the Discounted Cash Flow (DCF) yield.

In-the-Money (ITM)

A call option where the exercise or strike price is below current market price (or put option where exercise price is above).

Investment Bank

A business that specialises in raising debt and equity for companies.

Investment Company with Variable Capital (ICVC)

An alternative term for an open-ended investment company (OEIC).

Investment Trust

A company, not a trust, which invests in a diversified range of investments.

Layering

The second stage in the money laundering process, where multiple complex financial transactions are conducted to obscure the origin of illicit funds and create a complex audit trail.

Liquidity

The ease with which a security can be traded in a market or converted into cash. Liquidity is determined by the amount of two-way trade conducted in a security. Liquidity also describes the amount of an investor's financial resources held in cash.

Liquidity Risk

The risk that shares may be difficult to sell at a reasonable price.

Listing

When companies' securities are listed on the stock exchange and become available to be traded.

London Stock Exchange (LSE)

The UK market for listing and trading domestic and international securities.

Long Position

The position following the purchase of a security or buying a derivative.

Macroeconomics

The study of how the aggregation of decisions taken in individual markets determines variables such as national income, employment and inflation. Macroeconomics is also concerned with explaining the relationship between these variables, their rates of change over time and the impact of monetary and fiscal policy on the general level of economic activity.

Manager of Managers (MoMs) Fund

A multi-manager fund. It does not invest in other existing retail collective investment schemes. Instead, it entails the MoM fund arranging segregated mandates with individually chosen fund managers.

Marginal Cost (MC)

The change in a firm's total cost, resulting from producing one additional unit of output.

Marginal Revenue (MR)

The change in the total revenue generated by a firm from the sale of one additional unit of output.

Market Capitalisation

The total market value of a company's shares or other securities in issue. Market capitalisation is calculated by multiplying the number of shares or other securities a company has in issue by the market price of those shares or securities.

Market Maker

A stock exchange member firm which quotes prices and trade stocks during the mandatory quote period.

Market Timing

See Active Management.

Maturity

Date when the capital on a bond is repaid.

Mean-Variance Analysis

The use of past investment returns to predict the investment's most likely future return and to quantify the risk attached to this expected return. Mean variance analysis underpins Modern Portfolio Theory (MPT).

Median

A measure of central tendency established by the middle value within an ordered distribution containing an odd number of observed values, or the arithmetic mean of the middle two values, in an ordered distribution containing an even number of values.

Member Firm

A firm that is a member of a stock exchange or clearing house.

Memorandum of Association

The legal document that principally defines a company's powers, or objects, and its relationship with the outside world. The Memorandum also details the number and nominal value of shares the company is authorised to issue and has issued.

Microeconomics

An economic discipline that is principally concerned with analysing the allocation of scarce resources within an economic system. That is, micro-economics is the study of the decisions made by individuals and firms in particular markets and how these interactions determine the relative prices and quantities of factors of production, goods and services demanded and supplied.

Minimum Efficient Scale (MES)

The level of production at which a firm's long-run average production costs are minimised and its economies of scale are maximised.

Mode

A measure of central tendency established by the value or values that occur most frequently within a data distribution.

Modern Portfolio Theory (MPT)

The proposition that investors will only choose to hold those diversified, or efficient, portfolios that lie on the 'efficient frontier'. According to the theory, it is possible to construct an 'efficient frontier' of optimal portfolios offering the maximum possible expected return for a given level of risk.

Monetarists

Those economists who believe that markets are self-correcting, that the level of economic activity can be regulated by controlling the money supply and that fiscal policy is ineffective and possibly harmful as a macroeconomic policy tool. Also known as New Classical Economists.

Monetary Policy

The setting of short-term interest rates by a central bank in order to manage domestic demand and achieve price stability in the economy. Also known as stabilisation policy.

Money

Any object or record that is generally accepted as payment for goods and services and repayment of debts in any given economy or country.

Money Laundering (ML)

The process of turning dirty money (money derived from criminal activities) into money that appears to be legitimate.

Money-Weighted Rate of Return (MWRR)

The internal rate of return (IRR) that equates the value of a portfolio at the start of an investment period plus the net new capital invested during the investment period with the value of the portfolio at the end of this period. The MWRR, therefore, measures the fund growth resulting

from both the underlying performance of the portfolio and the size and timing of cash flows to and from the fund over this period.

Multiplier

The factor by which national income changes as a result of a unit change in aggregate demand.

Nasdaq

The second-largest stock exchange in the US. The National Association of Securities Dealers Automated Quotations lists certain US and international stocks and provides a screen-based quote-driven secondary market that links buyers and sellers worldwide.

National Debt

A government's total outstanding borrowing resulting from financing successive budget deficits, mainly through the issue of government-backed securities.

Negotiable Security

A security whose ownership can pass freely from one party to another. Negotiable securities are, therefore, tradeable.

New Issue

A new issue of ordinary shares whether made by an offer for sale, an offer for subscription or a placing. Also known as an initial public offering (IPO).

Nominal Value

The face or par value of a security. The nominal value is the price at which a bond is issued and usually redeemed and the price below which a company's ordinary shares cannot be issued.

Normal Frequency Distribution

A distribution whose values are evenly, or symmetrically, distributed about the arithmetic mean. Depicted graphically, a normal distribution is plotted as a symmetrical, continuous bell-shaped curve.

Normal Profit

The required rate of return for a firm to remain in business, taking account of all opportunity costs.

Offer Price

Price at which dealers sell stock.

Open

Initiate a transaction, eg, an opening purchase or sale of a future. Normally reversed by a closing transaction.

Open Economy

A country with no restrictions on trading with other countries.

Open-Ended

A type of investment such as OEICs or unit trusts which can expand without limit. Opposite of 'Closed-Ended'.

Open-Ended Investment Company (OEIC)

A collective investment vehicle similar to unit trusts. Alternatively described as an ICVC (Investment Company with Variable Capital) and in Europe as a SICAV.

Opening

Undertaking a transaction which creates a long or short position.

Opportunity Cost

The cost of forgoing the next best alternative course of action. In economics, costs are defined not as financial but as opportunity costs.

Option

A derivatives contract that confers from one party (the writer) to another (the holder) the right but not the obligation to either buy (call option) or sell (put option) an asset at a pre-specified price on, and sometimes before, a prespecified future date, in exchange for the payment of a premium.

Ordinary Shares

See Equity.

Out-of-the-Money (OTM)

A call option where the exercise or strike price is above the market price or a put option where it is below.

Par Value

See Nominal Value.

Passive Management

An investment approach employed in those securities markets that are believed to be price-efficient. The term also extends to passive bond management techniques collectively known as Immunisation.

Peer-to-peer Lending (P2P)

A way for people to lend money to individuals or businesses without the use of a traditional bank as an intermediary. Instead, an online service looks to match lenders with borrowers.

Perpetuity

An investment that provides an indefinite stream of equal prespecified periodic payments.

Placement

The first stage of money laundering. It involves the physical placement of illicit funds into the financial system, typically through methods such as cash deposits, currency exchanges or purchases of monetary instruments.

Population

A statistical term applied to a particular group where every member or constituent of the group is included.

Potential Output Level

The sustainable level of output produced by an economy when all of its resources are productively employed. Also known as the full employment level of output.

Preference Shares

Those shares issued by a company that rank ahead of ordinary shares for the payment of dividends and for capital repayment in the event of the company going into liquidation.

Premium

The amount of cash paid by the holder of an option to the writer in exchange for conferring a right. Also, the difference in the spot and forward exchange rate that arises when interest rates in the base currency are higher than those in the quoted currency.

Present Value

The value of a sum of money receivable at a known future date expressed in terms of its value today. A present value is obtained by discounting the future sum by a known rate of interest.

Price Elasticity of Demand (PED)

The effect of a small percentage change in the price of a good on the quantity of the good demanded. PED is expressed as a figure between zero and infinity.

Primary Market

The function of a stock exchange in bringing securities to the market and raising funds.

Proxy

An appointee who votes on a shareholder's behalf at company meetings.

Purchasing Power Parity (PPP)

The nominal exchange rate between two countries that reflects the difference in their respective rates of inflation.

Put Option

An option that confers a right, but not the obligation, on the holder to sell a specified amount of an asset at a prespecified price on or sometimes before a prespecified date.

Quantity Theory of Money

A theory that formalises the relationship between the domestic money supply and the general price level.

Quote-Driven

Dealing system driven by securities firms who quote buying and selling prices.

Redemption

The repayment of principal to the holder of a redeemable security.

Regression Analysis

A statistical technique used to establish the degree of correlation that exists between two variables.

Reinvestment Risk

The inability to reinvest coupons at the same rate of interest as the gross redemption yield (GRY). This in turn makes the GRY conceptually flawed.

Repo

The sale and repurchase of bonds between two parties, the repurchase being made at a price and date fixed in advance. Repos are categorised into general repos and specific repos.

Reserve Ratio

The proportion of deposits held by banks as reserves to meet depositor withdrawals and Bank of England credit control requirements.

Resistance Level

A term used in technical analysis to describe the ceiling put on the price of a security resulting from persistent investor-selling at that price level.

Resolution

A proposal on which shareholders vote.

Retail Bank

An organisation that provides banking facilities to individuals and small/medium-sized businesses.

Rights Issue

The issue of new ordinary shares to a company's shareholders in proportion to each shareholder's existing shareholding, usually at a price deeply discounted to that prevailing in the market. Also see Pre-emptive Rights.

Running Yield

The return from a bond calculated by expressing the coupon as a percentage of the clean price. Also known as the flat yield or interest yield.

Sample

A statistical term applied to a representative subset of a particular population. Samples enable inferences to be made about the population.

Secondary Market

The marketplace for trading in existing securities.

Securities

Financial instruments that represent ownership or debt in an entity. They include stocks, bonds, options and derivatives, which can be traded on financial markets.

Separate Trading of Registered Interest and Principal Securities (STRIPS)

The principal and interest payments of those designated government bonds that can be separately traded as zero coupon bonds (ZCBs).

Settlor

The creator of a trust.

Shadow Banking

Lending and other financial activities conducted by non-banking institutions or under unregulated conditions.

Share Capital
The nominal value of a company's equity or ordinary shares. A company's authorised share capital is the nominal value of equity the company may issue, whilst issued share capital is that which the company has issued. The term 'share capital' is often extended to include a company's preference shares.

Short Position
The position following the sale of a security not owned or selling a derivative.

Special Resolution
A proposal put to shareholders requiring 75% of the votes cast.

Spot Rate
A compound annual fixed rate of interest that applies to an investment over a specific time period. Also see Forward Rate.

Spread
Difference between a buying (bid) and selling (ask or offer) price. A strategy requiring the simultaneous purchase of one or more options and the sale of another or several others on the same underlying asset with either different exercise prices and the same expiry date or the same exercise prices and different expiry dates. Spreads include bull spreads, bear spreads and butterfly spreads.

Standard Deviation
A measure of dispersion. In relation to the values within a distribution, the standard deviation is the square root of the distribution's variance.

Stock Exchange
An organised marketplace for issuing and trading securities by members of that exchange.

Strike Price
See Exercise Price.

Substitute
A good is a substitute for another if a rise in the price of one results in an increase in demand for the other. As substitute goods perform a similar function to each other, they typically have a high price elasticity of demand (PED).

Supply Curve
The depiction of the quantity of a particular good or service firms are willing to supply at a given price. Plotted against price on the vertical axis and quantity on the horizontal axis, a supply curve slopes upward from left to right.

Swap
An over-the-counter (OTC) derivative whereby two parties exchange a series of periodic payments based on a notional principal amount over an agreed term. Swaps can take the form of interest rate swaps, currency swaps, commodity swaps and equity swaps.

T+2
Identifies when a trade will settle. 'T' refers to the trade date and '+2' identifies that the transaction will settle two business days after the trade date. Likewise: T+1, T+3 and so on.

Takeover
When one company buys more than 50% of the shares of another.

Technical Analysis
The analysis of charts depicting past price and volume movements to determine the future course of a particular market or the price of an individual security. Technical analysis is nullified by the weak form of the efficient market hypothesis (EMH).

Time Value
That element of an option premium that is not intrinsic value. The term 'time value' also relates to a sum of money which, by taking account of a prevailing rate of interest and the term over

which the sum is to be invested or received, can be expressed as either a future value (FV) or as a present value (PV), respectively.

Time-Weighted Rate of Return (TWRR)

The unitised performance of a portfolio over an investment period that eliminates the distorting effect of cash flows. The TWRR is calculated by compounding the rates of return from each investment sub-period, a sub-period being created whenever there is a movement of capital into or out of the portfolio.

Tracking Error

See Active Risk.

Treasury Bills

Short-term government-backed securities issued at a discount to par via a weekly central bank auction. Treasury bills do not pay coupons but are redeemed at par.

Trustees

The legal owners of trust property who owe a duty of skill and care to the trust's beneficiaries.

Underlying

The asset from which a derivative is derived.

Undertakings for Collective Investments in Transferable Securities (UCITS) Directive

An EU Directive originally introduced in 1985, but since revised to enable collective investment schemes (CISs) authorised in one EU member state to be freely marketed throughout the EU, subject to the marketing rules of the host state(s) and certain fund structure rules being complied with.

Unemployment

The percentage of the labour force registered who are employable and actively seeking a job, but are unable to find a job.

Unit Trust

A system whereby money from investors is pooled together and invested collectively on their behalf into an open-ended trust.

Volatility

A measure of the extent to which investment returns, asset prices and economic variables fluctuate. Volatility is measured by the standard deviation of these returns, prices and values.

Warrants

Negotiable securities issued by public limited companies (plcs) that confer a right on the holder to buy a certain number of the company's ordinary shares on prespecified terms.

Writer

Party selling an option. The writer receives premiums in exchange for taking the risk of being exercised against.

Yield

Income from an investment as a percentage of the current price.

Yield Curve

The depiction of the relationship between the gross redemption yields (GRYs) and the maturity of bonds of the same type.

Yield to Maturity (YTM)

See Gross Redemption Yield (GRY).

Zero Coupon Bonds (ZCBs)

Bonds issued at a discount to their nominal value that do not pay a coupon but which are redeemed at par on a prespecified future date.

Multiple Choice Questions

Multiple Choice Questions

The following additional questions are for learning and revision purposes. Whilst they are based on the syllabus, they do not necessarily replicate actual examination standard questions and are included to test your knowledge and understanding of the relevant sections of the workbook.

Please note that, as part of exam security, hand-held calculators are not allowed in CISI exam venues. Candidates must use the onscreen calculator for all CISI CBT exams in all languages in the UK and internationally.

1. An adviser wants to select a unit trust that is benchmarked against the FTSE All-Share Index and which will be suitable for a cautious investor. They should select the one that has a beta of:

A. 0.5
B. 1
C. 1.5
D. 2

2. A client has become incapable of understanding the information sent by their adviser and hence the adviser now cannot sign off on suitability as per an annual financial review. What should they do about the investment portfolio that they are managing?

A. Continue to manage the portfolio
B. Continue to take the client's instructions
C. Take instructions from the nearest family member
D. Take no action until an attorney is appointed

3. If a government increases its spending, and finances this through the issue of government bonds, this indicates that it is adopting what type of fiscal stance?

A. Contractionary
B. Expansionary
C. Neutral
D. Recessionary

4. Why would an investment fund seek UCITS status?

A. In order to be marketed and sold throughout the EU
B. In order to be authorised to be marketed and sold to institutional investors
C. In order to become listed on the stock market
D. In order to be authorised to engage in a higher level of gearing

5. **Your client is the founder of a company and is concerned that if they were to become very ill, it could have a serious effect on their business. Which type of cover would be most appropriate to consider?**

   A. Accident and sickness protection
   B. Income protection
   C. Key person protection
   D. Medical insurance

6. **Which of the following arrangements might be used by a firm to avoid a conflict of interest?**

   A. Disclosure
   B. Financial promotions
   C. Know your customer
   D. Suitability

7. **Under the efficient market hypothesis, a market is unlikely to operate as a 'strong-form efficient market' due to the existence of:**

   A. Insider dealing rules
   B. Money laundering regulations
   C. Best execution procedures
   D. Data protection rules

8. **Which type of collective investment scheme (CIS) would you expect to trade at a discount or premium to its net asset value (NAV)?**

   A. Unit trust
   B. ETF
   C. Investment trust
   D. SICAV

9. **What factor is irrelevant when assessing a defined benefit (DB) pension?**

   A. Age at which benefits can be taken
   B. Expected amount payable
   C. Investment performance of the fund
   D. Lump sum available at retirement

10. **A money launderer is moving funds between currencies, shares and bonds. This stage of the money laundering process is known as:**

    A. Integration
    B. Investment-switching
    C. Placement
    D. Layering

11. An investor is receiving half-yearly interest of $90 on their holding of $3,000 Treasury 6% Bond, which is currently valued at $3,600. What is the flat yield?

A. 2.5%
B. 3%
C. 5%
D. 6%

12. The central bank announces unexpectedly that short-term interest rates are to rise to 6%. What is the most likely effect on a holding of Treasury 5% Bond?

A. The coupon will fall
B. The coupon will rise
C. The price will fall
D. The price will rise

13. What is the principle behind the regulatory requirement to categorise clients?

A. To determine the risk tolerance of a client
B. To establish the level of regulatory protection that a client is to be afforded
C. To ensure that the financial adviser knows enough about the client to prevent money laundering
D. To establish the level of product disclosure required in a key features document

14. A parallel shift in the demand curve to the left for a good might be caused by which of the following?

A. Rising price of a complement
B. Falling consumer income
C. The good becomes fashionable
D. Increasing disposable income

15. Your client is aged 70 and is an experienced investor with a cautious attitude to risk. Based solely on this information, which asset allocation would you recommend as most likely to be most suitable?

A. Cash 5%; Bonds 25%; Equities 70%
B. Cash 10%; Bonds 35%; Equities 55%
C. Cash 15%; Bonds 50%; Equities 35%
D. Cash 50%; Bonds 50%; Equities 0%

16. Which of the following statements is true in relation to options?

A. The buyer of a call has the right to sell an asset
B. The buyer of a put has the right to buy or sell an asset
C. The seller of a call has the right to sell an asset
D. The buyer of a call has the right to buy an asset

17. The returns from an investment fund over the past ten years show the following results: 13.2%, 2.6%, –1.3%, 4.2%, –3.5%, 2.1%, 10.7%, 9.4%, 4.1% and 9.0%. What is the range?

A. 4.2%
B. 8.35%
C. 13.2%
D. 16.7%

18. If a company's Z-score analysis is negative, this is likely to indicate that the company:

A. Has a volatile profit performance
B. Is heading for imminent insolvency
C. Has a low level of gearing
D. Is relying too heavily on a limited customer base

19. Which of the following is not an advantage of collective investment schemes?

A. Control over which assets the fund manager picks
B. Diversification
C. Access to specialist investment management expertise
D. Economies of scale

20. When does a spot FX trade settle?

A. T+0
B. T+1
C. T+2
D. T+3

21. Which of the following removes the impact of cash flows in and out of a portfolio when measuring performance?

A. Total return
B. Time-weighted rate of return
C. Holding period return
D. Money-weighted rate of return

22. Which of the following measurements will provide the best indication of the degree of leverage within a company?

A. Return on capital employed
B. Debt-to-equity ratio
C. Asset turnover
D. Current ratio

23. Which of these correlation coefficients indicates the weakest relationship between two assets?

A. +1
B. +0.2
C. –0.5
D. –1

24. An investor receives share dividends from a company which is located in a different country from the one in which they reside. In order to obtain a reduced rate of withholding tax using the 'relief at source' method, the investor must normally:

A. Utilise the double taxation treaty facilities
B. Register as an expatriate for taxation purposes
C. Pay a special dispensation premium
D. File dual tax returns

25. What is the premise of the capital asset pricing model (CAPM)?

A. By combining securities into a diversified portfolio, the overall risk will be less than the risk inherent in holding any one individual stock
B. The expected return on a security or portfolio equals the rate on a risk-free security plus a risk premium
C. A single market beta can be used to capture all factors that determine a security's risk and expected return
D. It is impossible to beat the market because prices already incorporate and reflect all relevant information

26. Which of the following funds might have the highest levels of gearing?

A. Bond fund
B. Equity fund
C. Money market fund
D. Property fund

27. Which risk faced by investors cannot be mitigated by diversification?

A. Systematic risk
B. Liquidity risk
C. Issuer risk
D. Credit risk

28. Which of the following is a disadvantage of direct property investment?

A. Correlation with other asset classes is high
B. Limited portfolio diversification benefits
C. Property may earn rental income
D. Returns are eroded by inflation

29. Insider dealing rules apply to which of the following securities?

A. Oil futures
B. OEIC shares
C. Corporate bonds
D. Unit trust units

30. Which type of fund is likely to be the most suitable for a cautious investor in times of market falls?

A. Money market fund
B. High-yield bond fund
C. Global corporate bond fund
D. Government bond fund

31. Which of the following factors is most likely to be used to assess the future share price of a company on a technical analysis basis?

A. Line charts
B. Competitive position
C. Quality of management team
D. Approach to corporate governance

32. If a government decides to deal with a current account deficit by allowing the value of its currency to decline against other currencies, what will be the impact on a company?

A. It will reduce its costs for importing raw materials
B. The cost of services it obtains from abroad will be cheaper
C. Profits earned in other currencies will be worth less when translated into sterling
D. Its goods will be more competitive in overseas markets

33. Which type of investment is likely to be most suitable for a client whose attitude to risk is classified as low risk?

A. A commercial property fund
B. Investment grade government bonds
C. Hedge funds
D. High-yielding equities

34. An investor tells you that they will need a lump sum of $15,000 in 11 years' time. They are prepared to invest a lump sum today in a fixed-interest investment paying interest of 6% a year. The interest is paid semi-annually. How much should they invest today to achieve their goal?

A. $7,828
B. $7,902
C. $9,900
D. $9,976

35. Behaviour likely to give a false or misleading impression of the supply, demand or value of investments is most likely to constitute which of the following offences?

A. Market abuse
B. Money laundering
C. Front running
D. Insider dealing

36. Which of the following terms best relates to an investment policy that aims to track the movement of an index?

A. GARP investing
B. Value investing
C. Momentum investment
D. Passive investing

37. The type of customer due diligence necessary when an individual is identified as a politically exposed person (PEP) is known as:

A. Sensitive
B. Enhanced
C. Simplified
D. Extra

38. You calculate that your client will need to generate an income of $20,000 to meet her retirement needs. If they can earn 5% a year, then how much of a lump sum will be needed in ten years' time if inflation is expected to average 4% a year?

A. $205,000
B. $400,000
C. $592,000
D. $622,000

39. A portfolio's tracking error is a measure of:

A. Its volatility relative to the volatility of the market
B. Its outperformance against its benchmark
C. How closely it follows the index to which it is benchmarked
D. Its underperformance resulting from systematic risk

40. Which of the following measures provides an indication of the level of economic activity taking place within a country itself?

A. Gross domestic product
B. Gross national product
C. National income
D. Net national product

41. In a trust, which party has ownership of the assets?

A. Settlor
B. Trustee
C. Trust protector
D. Beneficiary

42. A company has a P/E ratio that is significantly higher than its sector average. This indicates that:

A. investors expect it to achieve above-average growth
B. its dividend performance is flat
C. investors anticipate a significant fall in profit
D. it is relatively uncompetitive

43. Which factor does not need to be considered when recommending term assurance?

A. Age
B. Attitude to risk
C. Health
D. Occupation

44. Fund ABC was valued at $10.5 million at the start of the year and $11.8 million at the end of the year. The asset allocation was 60% equities and 40% bonds. If the fund's benchmark assumes 50/50 allocation and, over this period, equities achieved +7% and bonds achieved +5%, then the fund will have:

A. Underperformed the benchmark by $649,000
B. Underperformed the benchmark by $670,000
C. Outperformed the benchmark by $649,000
D. Outperformed the benchmark by $670,000

45. In a traditional economic cycle, what stage immediately precedes the acceleration stage?

A. Deceleration
B. Recession
C. Boom
D. Recovery

46. What does a high Sharpe ratio indicate?

A. It has underperformed relative to the risk-free rate
B. The manager has taken on excessive levels of risk
C. The investment has provided a better risk-adjusted return
D. An investor has generated low returns for each unit of risk taken

47. The ongoing charges figure and the total expense ratio is used in conjunction with which of the following?

A. Analysis of company accounts
B. Comparison of collective investment schemes
C. Selection of a discretionary investment management provider
D. Performance measurement of a portfolio

48. Withholding tax is:

A. Levied on foreign investment income by national tax authorities
B. Levied by the UK on investment income earned by UK nationals
C. Only levied where there is a double taxation agreement in place
D. Only levied where the investor is a higher-rate taxpayer

49. An investor buys a call option for 10p on ABC ordinary shares exercisable at 100p in three months' time. The underlying share price is 120p. The option is described as which of the following?

A. At break-even
B. At-the-money
C. In-the-money
D. Out-of-the-money

50. Which of the following is a characteristic of whole-of-life assurance?

A. It can be arranged as level, increasing or decreasing cover
B. It is a liquid source of investment
C. It can help with the costs of long-term care
D. It combines an element of insurance with a savings plan

51. Which of the following is an example of how the financial services industry fulfils its core function of 'payment systems'?

A. Central securities depositories
B. Credit derivatives
C. Primary markets
D. SWIFT

52. A life assurance policy, where the sum insured is selected at the outset and there are no annual or terminal bonuses, is known as:

A. Non-profit
B. Term
C. Unit-linked
D. With-profit

53. Which of the following is not an AML or CFT offence?

A. Breaking client confidentiality by reporting your suspicions of a possible money laundering transaction
B. Failing to report a suspicion that a customer is investing the proceeds of illegal drug trafficking
C. Helping someone to invest funds that are known to be the proceeds of terrorism
D. Tipping off someone that they are to be interviewed for money laundering activities

54. 'Smart beta' would be associated with which type of fund?

A. A corporate bond fund
B. A global growth fund
C. An absolute return fund
D. An index tracker fund

55. Which of the following can be said of corporate bonds?

A. They have market risk and default risk
B. They have market risk, but no default risk
C. They have default risk, but no market risk
D. They have neither market risk nor default risk

56. Which is the definition of a country's invisible trade balance?

A. International transactions related to the purchase and sale of domestic and foreign investment assets
B. The difference between the value of imported and exported goods
C. The total value of goods and services that are flow in and out of the country
D. The difference between the value of imported and exported services

57. With which type of indexation methodology used for index trackers is investment performance exposed to both tracking error and counterparty risk?

A. Full replication
B. Optimisation
C. Sampling
D. Synthetic

58. An adviser who recommends a share with a beta of 2.5 for a cautious investor is most likely to be in breach of which rule?

A. Affordability
B. Conflict of interest
C. Know your customer
D. Suitability

59. Which of the following is an example of how the financial services sector fulfils its core function of managing risk?

A. Derivatives
B. IPOs
C. Savings accounts
D. Trade finance

60. Which of the following carries out the function of oversight of investment companies with variable capital (ICVCs) activities?

A. Authorised corporate director
B. Custodian
C. Depositary
D. Trustee

61. Which individual is a member of a defined benefit (DB) scheme?

A. Adam has a personal pension where he can direct which investments are held and can undertake his own trading
B. Anne has a pension scheme that she and her employer contribute to, and which is operated and managed by an insurance company
C. Janet is in a pension scheme that her employer contributes to, and where her final pension will depend on the size of the investment fund at retirement
D. John is in a non-contributory scheme that will pay a pension based on his average earnings before retirement

62. Which of the following type of investment vehicle is most likely to be highly geared?

A. Hedge fund
B. REIT
C. Fonds commun de placement
D. Smart beta fund

63. An airline establishes an agreement via an exchange-traded instrument with an oil company to pay a specific price in three months' time for delivery of a specific quantity of fuel at that time. This type of agreement is called:

A. An option
B. A future
C. A swap
D. A warrant

64. Trading systems where market makers provide continuous two-way prices during the trading day are described as which of the following?

A. Hybrid
B. Open outcry
C. Order-driven
D. Quote-driven

65. A client requires an ethical investment strategy and wants to ensure that none of their money is invested in companies involved in areas that they disagree with. Which type of fund would be most suitable for their needs?

A. Fund A which employs positive screening techniques
B. Fund B which employs negative screening technique
C. Fund C which uses positive engagement to identify companies that have the most responsible approach
D. Fund D which undertakes research to identify companies that have best-in-class social engagement strategies

66. To which contracts does the principle of utmost good faith apply?

A. Contract for discretionary portfolio management services
B. FX forwards
C. Life assurance contracts
D. Stock market trades

67. Why might absolute return funds not keep pace with traditional equity funds during a market rally?

A. They are only able to take 'long only' positions.
B. Their use of short positions and hedging will restrict performance
C. They are unable to take large positions in performing stocks
D. They have too much exposure to other asset classes

68. Which of the following is likely to have the least liquidity risk, so is most suitable to meet any cash needs of a client?

A. An emerging markets mutual fund
B. Equity mutual fund
C. Inflation-protected bond
D. Money market fund

69. When assessing the risk and return of an investment fund and comparing it to the performance of other similar portfolios, a manager is most likely to use which of the following to assess the largest loss that has occurred in the past?

A. Maximum drawdown
B. Sortino ratio
C. Sharpe ratio
D. Treynor ratio

70. The GBP/USD exchange rate is $1.25, and the interest rates in the US and UK for the next year are 1.5% and 1% respectively. What is the one year forward rate of exchange using interest rate parity?

A. $1.2438
B. $1.2562
C. $1.2450
D. $1.2549

71. As retirement approaches, the investment style that a client will most likely adopt would be which of the following?

A. Increasing risk to maximise sums available at retirement
B. Placing greater emphasis on long-term investments
C. Gradually moving investments into more secure products
D. Introducing more growth-oriented investments

72. In what way might age influence an investor's attitude to risk?

A. Older people are more comfortable with volatility, as they have many years of stock market experience
B. Older people are more able to accept investment losses due to longer investment horizons
C. In retirement, older people have more time to spend on analysing investment opportunities
D. In retirement, there is generally little or no scope to replace investment losses with earnings

73. 70% of a fund's assets are indexed to the S&P 500 and the balance is actively managed. This type of investment approach is normally known as:

A. Smart beta management
B. Momentum investment management
C. Core satellite management
D. Convertible arbitrage management

74. Delivery versus payment (DvP) is when:

A. The buying and selling of assets are transacted in real time
B. A bank acts as custodian for both buyer and seller
C. Two parties can use the same technology
D. Simultaneous exchange of securities and payment takes place

75. In financial planning, time horizon is concerned with:

A. A client's expected lifespan
B. The duration of the bonds held within an investment portfolio
C. The length of the anticipated client relationship
D. The length of time that the client can invest

76. The EUR/USD rate is quoted at 1.1640/60. If you want to buy 100,000 euros, how many dollars would you need to deliver?

A. $85,763
B. $85,910
C. $116,400
D. $116,600

77. What would a double tax agreement (DTA) deal with?

A. Corporate actions
B. Fund management
C. Settlement of a cross border trade
D. Taxation of investment income

78. A fund manager has decided to adopt a core/satellite approach to its investment strategy. The key characteristic of this strategy is that it combines:

A. Fundamental analysis with technical analysis
B. Active management with passive management
C. Short-term objectives with long-term objectives
D. Top-down focusing with bottom-up focusing

79. Your client says they are a risk tolerant investor and is seeking to maximise potential returns. Based solely on this information, what would be the most appropriate portfolio for them?

A. 100% cash
B. 30% cash / 60% bonds / 10% equity
C. 10% cash / 40% bonds / 50% equity
D. 5% cash / 10% bonds / 85% equity

80. Which of the following is a characteristic of an order-driven market?

A. Market makers are obliged to provide two way prices for at least the minimum quote size
B. Orders are received and conducted over the telephone
C. Price quotes must be displayed throughout the mandatory quote period
D. Orders from buyers and sellers are automatically matched and executed

81. If a trader deals on the basis of inside information, this type of behaviour is likely to be classed as:

A. Improper disclosure
B. Misuse of information
C. Dissemination
D. Insider information

82. How are repayment claims made for withholding tax (WHT)?

A. Tax must be reclaimed in the investor's country of domicile
B. Tax reclaims are automatically provided under double taxation treaties
C. Tax reclaims must be made in the issuer's country
D. The timing of claims for tax is subject to global standards

83. Your client has $100,000 to invest and needs to generate a retirement sum of $200,000. If your expected annual rate of return is 5%, about how long will it take for the money reach the target value?

A. 10 years
B. 12 years
C. 14 years
D. 16 years

84. Diversification is best achieved by combining securities whose returns:

A. Are as positively correlated as possible
B. Have a near-zero correlation
C. Have similar standard deviations
D. Have widely different standard deviations

85. Which of the following market participants acts as agent when executing trades for clients?

A. Broker
B. Dealer
C. Market maker
D. Principal

86. How is accrued interest on a bond investment treated for tax purposes?

A. Income tax
B. Capital gains tax (CGT)
C. Corporation tax
D. Estate tax

87. Which of the following information, established during a fact-finding meeting with a client seeking investment advice, would be regarded as 'soft facts'?

A. Age, occupation and earning potential of the client and partner
B. The need for a client to have funds to pay for a child's university education or an elderly parent's care
C. Their experience of investment markets and volatility
D. Amounts owing on loans and credit cards, and their planned date for repaying a mortgage

88. If a share price falls, which of the following is true?

A. P/E ratio rises; dividend yield falls
B. P/E ratio falls; dividend yield rises
C. P/E ratio rises; dividend yield rises
D. P/E ratio falls; dividend yield falls

89. Which of the following statements relates to the weak form of the efficient markets hypothesis (EMH)?

A. All available information, including public and private, is fully reflected in security prices
B. Security prices reflect all past trading information
C. Security prices reflect all publicly available information
D. Future security prices can be predicted based on technical analysis

90. Which of the following types of insurance policy has a significant investment element?

A. Level term
B. Increasing term
C. Non-profit
D. Unit-linked

91. Which element of a client's risk profile is objective rather than subjective?

A. Risk tolerance
B. Risk perception
C. Attitude to risk
D. Risk capacity

92. Holding period return (HPR) refers to which of the following?

A. Absolute profit or loss made on a security
B. Combination of dividends and capital growth
C. Rising dividend stream paid by companies
D. Total dividends before tax

93. During a lengthy consultation, a client expresses their need for high liquidity allied to a short investment timescale. Which of the following products is likely to be the most suitable?

A. Short-dated bonds
B. Exchange-traded funds
C. Equities
D. Split capital investment trusts

94. What type of investment management technique is immunisation?

A. Active bond strategy
B. Passive bond strategy
C. Active equity strategy
D. Passive equity strategy

95. A blind trust is likely to be used in what circumstance?

A. By grandparents seeking to protect assets from being wasted by a financially irresponsible grandchild
B. In order to establish a charitable trust for local causes
C. By parents seeking to make arrangements for the financial maintenance of a child who is unable to look after their own affairs
D. By people in the public eye who need to avoid accusations of conflicts of interest

96. Which of the following statements regarding modern portfolio theory (MPT) is correct?

A. Systematic risk is the risk associated with a specific stock
B. Unsystematic risk can be reduced through diversification
C. Systemic risks are market risks that cannot be diversified away
D. Diversification can be achieved by investing in as few as 30-40 stocks

97. When determining a client's risk tolerance, which of the following is considered to be an objective factor?

A. Their stage of life
B. Their personality and temperament
C. Their level of financial knowledge
D. Their past experiences

98. In which situation would a power of attorney be used?

A. Appointing a trustee
B. Bankruptcy
C. Creating a partnership
D. Managing someone's affairs

99. Client A is a member of a contributory company pension scheme and Client B is a member of a non-contributory scheme. Which of the following is the major difference between the two schemes?

A. Client A's final pension will depend on the fund's investment performance
B. Client B's scheme will pay a guaranteed level of income at retirement
C. Client A will have to fund the entire cost of her pension
D. Client B's employer will fund the whole cost of her pension

100. What are the three components of a client's risk profile?

A. Risk tolerance, risk perception and risk aversion
B. Risk tolerance, risk perception and risk capacity
C. Attitude to risk, risk aversion and risk capacity
D. Attitude to risk, risk perception and risk tolerance

Answers to Multiple Choice Questions

1. A Chapter 6, Section 4.4

Beta (β) is a measure of the average historic sensitivity of a fund's returns compared to the broader market: A beta of between 0 and 1 means the security has less risk, so it would be expected to move in the same direction as the market, but by a smaller amount.

2. D Chapter 8, Section 3.1.2

An individual can execute a power of attorney (PoA) during their lifetime while they are of sound mind and appoint someone to carry out certain activities. When they are no longer of a sound mind (*non compos mentis*), their authority to continue to act ceases and that person will need to apply to the courts to be appointed as a receiver.

3. B Chapter 5, Section 1.7

An expansionary stance to fiscal policy involves the government increasing government spending to stimulate economic activity, and funding this through borrowing to create a larger budget deficit.

4. A Chapter 4, Section 1.2.3

The Undertakings for Collective Investments in Transferable Securities (UCITS) directives have been issued with the intention of creating a framework for cross-border sales of investment funds throughout the EU. They allow an investment fund to be sold throughout the EU, subject to regulation by its home country regulator.

5. C Chapter 8, Section 2.5.5

Key person protection involves a company insuring itself against the financial loss that it may suffer from the death or serious illness of an employee whose skill, knowledge, experience or leadership contribute to the company's continued financial success and whose death or serious illness could lead to a financial loss for the company.

6. A Chapter 7, Section 4.6.2

A conflict of interest can occur when someone in a fiduciary position has personal or professional interests that compete with their duty to act in the client's best interest. Open disclosure of any fees or commissions can aid removal of this conflict. Disclosure of material information becomes more important where the adviser or firm may have an interest in a customer undertaking a transaction.

7. A Chapter 6, Section 1.2

A strong form efficient market is one in which share prices reflect all available information (both public and private), so no one can earn excess returns. Insider dealing laws prevent holders of material inside information from trading on it; these laws should therefore make strong form efficiency impossible, except where they are universally ignored.

8. C Chapter 4, Section 1.2.4

The share price of a closed-ended investment company (eg, investment trusts) is not necessarily the same as its net asset value (NAV). The company will value the underlying portfolio daily and provide details of the NAV to the stock exchange on which it is quoted and traded. The price it subsequently trades at will be determined by demand and supply for the shares, and may be above or below the NAV.

9. C Chapter 8, Sections 1.3.1

An occupational pension scheme (OPS) that takes the form of a defined benefit (DB) scheme provides a predetermined pension amount based on specified criteria. A DB scheme essentially promises a given level of income at retirement, usually expressed as a proportion of final earnings. The client can have some reasonable certainty about the amount of income that they will receive in retirement, so the main concerns for discussion with an adviser will be whether this is sufficient, how any annual increases are calculated, and the long-term security of the pension fund.

Investment performance is more critical to defined contribution (DC) schemes.

10. D Chapter 2, Section 2.1.3

Layering is the second stage of the process and involves moving money around in order to make it difficult for the authorities to link the placed funds with the ultimate beneficiary of the money. Disguising the original source of the funds might involve buying and selling foreign currencies, shares or bonds.

11. C Chapter 3, Section 3.4.1

Flat yield (%) = Coupon / Clean price = 180 / 3,600 = 0.05 or 5%.

12. C Chapter 3, Section 3.5.1

There is an inverse relationship between interest rates and bond prices: if interest rates increase, bond prices will decrease; and if interest rates decrease, bond prices will increase.

13. B Chapter 7, Section 1.1

The underlying rationale for client categorisations is to protect ordinary investors who may not have adequate knowledge and experience to adequately evaluate the suitability of a product.

14. B Chapter 5, Section 3.1.1

A parallel shift in the demand curve will occur if demand for a product falls. A fall in consumer income should lead to a fall in demand for normal goods and cause the demand curve to move to the left.

15. D Chapter 7, Section 2.2

At this stage of their life, an investor is likely to be interested in the certainty of returns to fund the costs of retirement. A 50:50 allocation to cash and bond is consistent with this, as well as their attitude to risk and capacity for loss.

16. D Chapter 3, Section 6.2.2

A call option is where the buyer has the right to buy the asset at the exercise price, if they choose to. The seller is obliged to deliver if the buyer exercises the option.

17. D Chapter 5, Section 4.1.2

The range is the difference between the highest and lowest values in a set of data. In this case, the range is 13.2% – (-3.5%) = 16.7%.

18. B Chapter 5, Section 7.3.4

Typically, a Z-score of 1.8 or below suggests that the company is in financial distress, and there is a high probability that it will go bankrupt; other danger signals include an increased use of leased assets and an overdependence on one customer. If the Z-score is negative, this implies that the company's insolvency is imminent.

19. A Chapter 4, Section 1.1

One rationale for investing collectively is to access the investing skills of a fund manager. Active fund managers follow their chosen markets closely and will carefully consider what to buy and whether to keep or sell their chosen investments. It follows that investors do not have any control over the investments in the fund that they hold.

20. C Chapter 3, Section 2

Spot transactions are immediate currency deals that are settled within two working days (ie, T+2).

21. B Chapter 6, Section 5.2.3

The time-weighted rate of return (TWRR) removes the impact of cash flows on the rate of return calculation by breaking the investment period into a series of sub-periods. A sub-period is created whenever there is a movement of capital into or out of the fund. Immediately prior to this point, a portfolio valuation must be obtained to ensure that the rate of return is not distorted by the size and timing of the cash flow. The TWRR is calculated by compounding the rate of return for each of these individual sub-periods, applying an equal weight to each sub-period in the process.

22. B Chapter 5, Section 7.2.1

A company's financial gearing (alternatively termed 'leverage') describes its capital structure, or the ratio of debt-to-equity capital it employs.

23. B Chapter 5, Section 4.2.2

Correlation measures how the returns from two different assets move together over time and is scaled between +1 (perfectly positively correlated) and -1 (perfectly negatively correlated). Where there is no predictable common movement between security returns (ie, they tend to move independently of each other), there is said to be zero or imperfect correlation; the close that the correlation is to zero, the weaker the relationship.

24. A Chapter 7, Section 7.4

Under the 'relief at source' method, it is possible for a reduced rate of WHT to be deducted, instead of the normal domestic rate, by making appropriate arrangements in that country and obtaining the necessary documentation under the appropriate double taxation treaty.

25. B Chapter 6, Section 1.3

The CAPM says that the expected return on a security or portfolio equals the rate on a risk-free security plus a risk premium and, if the expected return does not meet or beat this required return, the investment should not be undertaken.

26. D Chapter 3, Section 4.2

Property funds can have levels of gearing that vary from 0% to 90%, with many funds limited to between 50% and 70%.

27. A Chapter 6, Section 1.1

Systematic risks are market risks that cannot be diversified away; hence, it is also referred to as undiversifiable risk or market risk.

28. B Chapter 3, Section 4.1

Direct property investment is highly illiquid as a result of not being instantly tradeable.

29. C Chapter 2, Section 2.2

The securities covered by the insider dealing legislation typically include bonds (issued by a company or a public sector body). The definition of securities does not normally embrace commodities and derivatives on commodities (such as options and futures on agricultural products, metals or energy products), or units/shares in mutual funds.

30. A Chapter 3, Section 1.3

A money market fund contains short-term instruments that should have relatively lower volatility.

31. A Chapter 5, Section 6

Fundamental analysis involves the financial analysis of a company's published accounts, along with a study of its management, markets and competitive position. Technical analysis also seeks to evaluate a company, but instead of analysing a company's intrinsic value and prospects, it uses historical price and volume data to assess where the price of a security or market will move in the future.

Technical analysis uses charts of price movements along with technical indicators and oscillators to identify patterns that can suggest future price movements.

32. D Chapter 5, Section 1.4.4

A fall in the nominal value of the currency will increase a trade surplus or reduce a trade deficit as exports will be more competitive.

33. B Chapter 7, Section 2

Government bonds have a lower volatility than the other assets mentioned and are more suitable for an investor with a low risk tolerance.

34. A Chapter 5, Section 5.3

Present value (PV) = FV / $(1 + r/i)^{n \times i}$ where FV is the final value, r is the rate of interest, n is the number of years, and i is the number of time periods within a year. In this case, PV = \$15,000 / $(1 + 0.06/2)^{11x2}$ = \$15,000/1.03^{22} = \$7,828 (to the nearest dollar).

35. A Chapter 2, Section 2.3

Manipulating transactions is a type of market abuse. This involves trading, or placing orders to trade, that gives a false or misleading impression of the supply of, or demand for, one or more investments, thus raising or depressing the price of the investment to an abnormal or artificial level.

36. D Chapter 6, Section 2.1.1

Passive management will be seen in those mutual funds that are described as index-tracker funds. Index tracking, or indexation, necessitates the construction of a portfolio to track, or mimic, the performance of a recognised underlying index.

37. B Chapter 2, Section 2.1.4

Politically exposed persons (PEPs) are individuals who require heightened scrutiny because they hold or have held positions of public trust, such as government officials, senior executives of government corporations, politicians, important political party officials and so on, along with their families and close associates. In such cases of higher risk, enhanced due diligence (EDD) measures must be applied on a risk-sensitive basis.

38. C Chapter 5, Sections 5.2 and 5.3

Dividing \$20,000 by 0.05 (ie, 5%) shows us that the client will need a lump sum of around \$400,000. To adjust that for inflation, we need to then multiply this figure by $(1 + 0.04)^{10}$ to give an inflation-adjusted lump sum needed of \$592,000.

39. C Chapter 4, Section 1.3

When investing in a tracker fund, it is important to understand the tracking error. Tracking error arises from both underperformance and outperformance of the index being tracked. A high tracking fund just refers to the amount of deviation from the tracking index and hence should be accompanied by a higher performance than the underlying. Note that there will always be an element of tracking error between a 'live' portfolio and the index that it aims to track, because of the actual costs involved in running the live portfolio (eg, management fees and costs of dealing).

40. A Chapter 5, Section 1.2

GDP measures the total market value of all final goods and services produced domestically during a calendar year. Market value is the value of output at current prices inclusive of indirect taxes, such as VAT. Another way of putting this is that GDP is a measure of the final output of a nation's economy, where final output is defined as the value of goods and services purchased by the end user. Hence, it provides an indication of the level of economic activity taking place within a country.

41. B Chapter 8, Section 3.2.1

The settlor is the person who creates the trust and who passes ownership of their assets to the trustees. The trustees hold the assets that are transferred to them, and manage these assets in accordance with the terms of the trust and on behalf of the beneficiaries.

42. A Chapter 5, Section 7.4.2

A company with a high P/E ratio relative to its sector average reflects investors' expectations that the company will achieve above-average growth.

43. B Chapter 8, Section 2.4.3

Term assurance is a type of policy that pays out a lump sum in the event of death occurring within a specified period. Term assurance has no investment element, so a client's attitude to risk is irrelevant.

44. D Chapter 6, Section 5.3

Had the fund been invested in line with the benchmark (ie, 50% equities and 50% bonds), then each element would have been valued at $5.25 million at the start of the year. At the end of the year, the value would have been: ($5.25 million x (1 + 0.07)) + ($5.25 million x (1 + 0.05)) = $11.13 million. However, the fund value was actually $11.8 million. This means that the fund outperformed the benchmark by $0.67 million (ie, $11.8 million - $11.13 million).

45. D Chapter 5, Section 1.3

The normal consecutive sequence of an economic cycle is recovery, acceleration, boom, deceleration, recession.

46. C Chapter 6, Section 5.4

The Sharpe ratio measures how many excess units of returns an investor can achieve over the risk-free rate for each unit of risk taken. The higher the Sharpe ratio, the better the risk-adjusted performance of the investment.

47. B Chapter 4, Section 1.2.1

The ongoing charges figure (OCF) covers costs and expenses for the running of the fund such as dealing commissions, audit fees and custody fees. Another way that these costs may be disclosed to investors is through the total expense ratio (TER).

48. A Chapter 7, Section 7.4

If investors hold shares in overseas companies, they will receive dividends that may have had tax deducted before payment. This is known as 'withholding tax' (WHT) and is usually deducted at source by the issuer or their paying agent. To address the issue of double taxation on dividends or interest income, governments enter into double taxation treaties (or double tax agreements (DTAs)) to agree how any payments will be handled.

49. C Chapter 3, Section 6.2.3

A call option is in-the-money when its strike price is below the current price of the underlying asset.

50. D Chapter 8, Section 2.4.2

The reason for whole-of-life policies being taken out is not normally just for the insured sum itself. Often, they are bought as part of a protection planning exercise to provide a lump sum in the event of death, which might be used to pay off the principal in an endowment mortgage or to provide funds to assist with the payment of estate taxes (eg, inheritance tax (IHT)). They can therefore serve two purposes, both protection and investment.

51. D Chapter 1, Section 1.1

Payment and banking services operated by the financial services sector provide the practical mechanisms for money to be managed, transmitted and received quickly and reliably. SWIFT enables its members to exchange financial information securely and reliably and, in so doing, standardise international financial transactions.

52. A Chapter 8, Section 2.4.2

A non-profit policy is one that is for a guaranteed sum only, where the insured sum is chosen at the outset and is fixed.

53. A Chapter 2, Section 2.1.2

The money laundering regulations require firms to train their staff adequately in the regulations and how to recognise and deal with suspicious transactions. The money laundering reporting officer (MLRO) is the person responsible for overseeing a firm's anti-money laundering activities and programme. They are responsible for receiving reports of suspicious activity from any employee in the business, considering all reports, and filing reports of any suspicious activity or transactions with the appropriate law enforcement agency.

54. D Chapter 4, Section 1.3

One type of index tracker fund that is available is 'smart beta'. Instead of tracking just an index, smart beta funds will take into account other factors such as volatility or momentum when creating an index that they will track.

55. A Chapter 3, Section 3.5

The main risks associated with holding bonds are default risk (ie, the risk that interest payments and the repayment of the bond may not be made) and market risk (ie, the risk that movements in interest rates have a significant impact on the value of bond holdings).

56. D Chapter 5, Section 1.4

The invisible trade balance is the difference between the value of imported and exported services. Answer A is the capital account, B is known as the visible trade balance, and C is the country's current account.

57. D Chapter 4, Section 1.3

Synthetic replication involves the fund providers entering into a swap agreement with single or multiple counterparties. The provider agrees to pay the return of a predefined basket of securities to the swap provider in exchange for the index return. The main advantage of synthetic replication tends to be lower tracking error and lower costs, but with the downside of counterparty risk.

58. D Chapter 6, Section 4.4

Regulators expect firms to ensure their recommendations are suitable and appropriate for their customers. A share with a high beta is potentially unsuitable for a risk-averse investor, whereas one that has acted in line with market movements or defensively may be more appropriate.

59. A Chapter 1, Section 1.1

The financial services sector allows risks to be managed effectively and efficiently through the use of insurance and increasingly sophisticated derivatives, to offset certain exposures or to speculate against events (anticipated or unanticipated).

60. C Chapter 4, Section 1.2.3

A depositary is responsible for holding the fund's investments, looking after the investments on behalf of the fund's shareholders, and overseeing the activities of the ACD.

61. D Chapter 8, Section 1.3.1

An occupational pension scheme (OPS) that takes the form of a defined benefit (DB) scheme provides a predetermined pension amount based on specified criteria. There are two types: final salary schemes, where the pension received is related to the number of years of service and the individual's final salary; and career-averaged schemes, which calculate the pension based on the average salary earned over the individual's career. Answers A, B and C all relate to defined contribution (DC) schemes.

62. A Chapter 4, Section 2.2.1

Many hedge funds borrow funds and use derivatives, to potentially enhance their returns.

63. B Chapter 3, Section 6.1

A futures contract is a legally binding agreement between two parties: a buyer and a seller. The buyer agrees to pay a prespecified amount for the delivery of a particular quantity of an asset at a future date. The seller agrees to deliver the asset at the future date, in exchange for the prespecified amount of money which is based on the price they agree between them.

64. D Chapter 3, Section 5.3.1

Quote-driven trading systems employ market makers to provide continuous two-way, or bid and offer (buy and sell) prices during the trading day regardless of market conditions. Market makers make a profit, or turn, via this price spread.

65. B Chapter 6, Section 2.2.3

Negative screening deliberately excludes companies involved in 'undesirable' activities. Overall, a negative screening process tends to explicitly avoid more companies than a positive screening process.

66. C Chapter 8, Section 2.4.2

The principle of utmost good faith applies to insurance contracts. This places an obligation on the person seeking insurance to disclose any material facts that may affect how the insurance company may judge the risk of the contract they are entering into. Failure to disclose a material fact gives the insurance company the right to avoid paying out in the event of a claim.

67. B Chapter 6, Section 2.1.3

An absolute return strategy seeks to make positive returns in all market conditions by employing a wide range of techniques, including short selling, futures, options and other derivatives, arbitrage, leverage and unconventional assets. While absolute return funds have the potential to outperform during market downturns, they are unlikely to keep pace with traditional equity funds during a market rally, as their short and hedging positions could act as a drag on performance.

68. D Chapter 3, Section 1.2

The money markets are characterised by the issue, trading and redemption of short-dated negotiable securities, usually with a maturity of up to one year. From this, money market funds should contain cash assets and short-dated securities, so should present the least liquidity risk should a client need to access funds.

69. A Chapter 6, Section 5.4

Maximum drawdown is the maximum amount of loss from a high, through the drawdown and back to the point where the high is reached again.

70. **B** **Chapter 3, Section 2**

The forward rate in one year's time will be based on the spot rate adjusted by the relative interest rates. The formula is: Forward rate = Spot rate x (1 + quote currency interest rate/ 1 + base currency rate) so in this case, the forward rate = $1.25 x (1.015/1.010) = $1.2562.

71. **C** **Chapter 8, Section 1.3.3**

Lifestyling is an approach to automatically switch to lower risk assets as the intended retirement age approaches.

72. **D** **Chapter 7, Section 1.3.4**

The client's age indicates the stage of life they have reached, which may have implications for any asset allocation strategy – eg, as clients grow older, they are generally less willing to take capital risks, because they cannot easily replace any money they lose through earnings (if at all).

73. **C** **Chapter 6, Section 2.1.4**

Index trackers and actively managed funds can be combined in what is known as core-satellite management. This is achieved by indexing, say, 70% to 80% of the portfolio's value so as to minimise the risk of underperformance ('core'); and then fine-tuning this by investing the remainder in a number of specialists actively managed funds or individual securities ('satellites').

74. **D** **Chapter 3, Section 9.2.2**

Settlement is the final phase of the trading process, and the generally accepted method is delivery versus payment (DvP), which requires the simultaneous exchange of stock and cash.

75. **D** **Chapter 7, Section 3.3**

Time horizon refers to the period over which a client can consider investing their funds. Definitions of time horizons vary, but short term is usually considered to be up to five years, medium term from five to ten years, and long term to be ten years or more. Time horizon is very relevant when selecting the types of investment that may be suitable for a client.

76. **D** **Chapter 3, Section 2**

When currencies are quoted, the first currency is the base currency and the second is the counter or quote currency. The base currency is always equal to one unit of that currency. Based on a quote of 1.1640/60, if you want to buy €100,000 then you will need to pay the higher of the two prices and deliver $116,600 (ie, €100,000 x 1.1660).

77. **D** **Chapter 7, Section 7.4**

To address the issue of double taxation on dividends and other income payments, governments enter into double taxation treaties to agree how those payments will be handled.

78. B Chapter 6, Section 2.1.4

Index trackers and actively managed funds can be combined in what is known as core-satellite management.

79. D Chapter 6, Section 4.5

The more adventurous investor who can remain invested for the long term (ie, five years or more) will hold a greater proportion of medium- and high-risk equity investments, because higher risk means greater potential for higher returns.

80. D Chapter 3, Section 5.3.1

An order-driven market is one that employs either an electronic order book or an auction process to match buyers with sellers. In both cases, buyers and sellers are matched in strict chronological order by price and the quantity of shares being traded and do not require market makers.

81. D Chapter 2, Section 2.3

Insider dealing is an example of market abuse, which occurs when an insider deals, or tries to deal, on the basis of inside information.

82. C Chapter 7, Section 7.4

Investors must file a repayment claim with the foreign tax authority to reclaim the withheld tax.

83. C Chapter 5, Section 5.3.1

A useful tool is to know how to simply calculate how long it would take for an investment to double in value. A shorthand way is the 'Rule of 72' – this involves dividing 72 by the annual rate of return or growth rate, and the result is a (very rough but reasonably accurate) estimate of the time this would take. In this case, dividing 72 by 5 gives 14.4; ie, it will take about 14 years for the investment to double in value at an expected annual rate of return of 5%.

84. B Chapter 5, Section 4.2.2

Where there is no predictable common movement between security returns (ie, they tend to move independently of each other), there is said to be zero or imperfect correlation; the closer that the correlation is to zero, the weaker the relationship, and therefore the greater the diversification benefits.

85. A Chapter 3, Section 5.3.2

When a client wishes to place an order, the broker firm that they deal with to execute the trade may act on an agency or principal basis. When a firm acts as agent, the firm arranges deals for others and makes money by charging a commission on the deal. This agency's role is commonly described as acting as a broker. When a firm acts as principal, then when the client places an order with it to sell shares, the firm will execute this order against its own trading book.

86. A Chapter 7, Section 7.3

Bonds are quoted clean but settled dirty, which means that accrued interest is added to the contract afterwards. Such payments are usually regarded as interest and are liable to income tax, or can be claimed as a deduction.

87. C Chapter 7, Section 2.1

Subjective factors, or soft facts, are about attitudes that may influence a client's attitude to risk.

88. B Chapter 5, Sections 7.4.2 and 7.4.3

The formula for P/E ratio is: P/E ratio (x) = Share price / EPS. If the share price (ie, the numerator in the formula) falls, then it follows that the P/E will fall. Similarly, the formula for dividend yield is: Dividend yield (%) = Net dividend per share / Share price. If the share price (ie, the denominator in this formula) falls, then it follows that the dividend yield will rise.

89. B Chapter 6, Section 1.2

With the weak form EMH, security prices fully reflect past share price and trading volume data. As a consequence, successive future share prices should move independently of this past data in a random fashion, thereby nullifying any perceived informational advantage from adopting technical analysis to analyse trends.

90. D Chapter 8, Section 2.4.2

With unit-linked policies (a type of whole-of-life policy), the return will be directly related to the investment performance of the units in the insurance company's fund. Each month, premiums are used to purchase units in an investment fund.

91. D Chapter 7, Section 2.1.3

Risk capacity is the client's ability to absorb any losses that may arise from making a particular investment. Risk tolerance and risk perception are partly subjective, but risk capacity is largely a matter of fact.

92. B Chapter 6, Section 5.2

Holding period return (HPR) simply measures how much the portfolio has increased in value over a period of time. One limitation of HPR is that it does not take into account the timing of cash flows into and out of the fund, so it is not a particularly useful measure for most investment funds.

93. A Chapter 7, Section 4.3

The client needs high liquidity and can only invest in the short term, so of the investment types quoted, only short-dated bonds would meet the criteria.

94. B Chapter 6, Section 2.3

Immunisation is a passive management technique employed by bond portfolio managers with a known future liability to meet. An immunised bond portfolio is one that is insulated from the effect of future interest rate changes.

95. D Chapter 7, Section 1.3.4

Where a client may be a politician or hold a senior position which is in the public spotlight, they may need to distance themselves from any investment decision-making so that there can be no accusation of them exploiting their position or knowledge. In such cases, it is often common to establish a blind trust where all investment decisions are taken on a totally discretionary basis and where the client is deliberately kept unaware of trading decisions or their rationale.

96. B Chapter 6, Section 1.1

Modern portfolio theory (MPT) states that the risk for individual stocks consists of systematic risk (ie, market risks that cannot be diversified away) and unsystematic (ie, the risk associated with a specific stock and can be diversified away). According to MPT, a portfolio of 15-20 stocks across a range of sectors is enough for it to be well-diversified.

97. A Chapter 7, Section 2.1.1

Objective factors are factors that are quantifiable elements that can influence a client's financial situation and risk tolerance – eg, the client's stage of life. Answers B, C and D are all subjective factors.

98. D Chapter 8, Section 3.1.2

A power of attorney is a legal document that a client executes to authorise someone else to undertake a specific transaction, or in order for them to manage their affairs.

99. D Chapter 8, Section 1.3.1

Occupational pension schemes (OPSs) usually require the employees to contribute a proportion of their earnings, known as contributory pension schemes; in some cases, however, the employer funds the whole cost, known as non-contributory schemes. Client B is a non-contributory scheme, meaning it is funded wholly by their employer.

100. B Chapter 7, Section 2.1

There are three components of risk: risk tolerance, risk perception and risk capacity.

Syllabus Learning Map

Syllabus Unit/ Element		Chapter/ Section
Element 1	The Financial Services Sector	Chapter 1
1.1	**The Purpose and Structure of the Financial Services Sector** On completion the candidate should:	
1.1.1	know the function of the financial services sector in the economy: • transferring funds between individuals, businesses and government • risk management	1.1
1.1.2	know activities associated with wholesale financial markets and retail financial markets	1.2
1.1.3	know the role of the main institutions/organisations: • retail banks • investment banks • pension funds • fund managers	1.2
1.1.4	know activities associated with custodians	1.2
1.1.5	understand the roles of investment management and financial planning in the wealth management sector: • investment managers • financial planners • private banks • platforms	1.3

Element 2	Industry Regulation	Chapter 2
2.1	**Financial Services Regulation** On completion, the candidate should:	
2.1.1	know the objectives and benefits of regulation; the main differences between rules-based and principles-based approaches to financial regulation; the role of the main international regulatory organisations; and how regulations are implemented at a national level; importance of ethical standards	1 and 3
2.2	**Financial Crime** On completion, the candidate should:	
2.2.1	know the role of the Financial Action Task Force (FATF)	2.1.1
2.2.2	know the main offences associated with money laundering and terrorist financing and the regulatory obligations of financial services firms	2.1.2
2.2.3	know the stages of money laundering	2.1.3
2.2.4	know the client identity procedures	2.1.4
2.2.5	know what constitutes market abuse	2.3

Syllabus Unit/ Element		Chapter/ Section
2.2.6	know activities generally considered to insider dealing	2.2

Element 3	Asset Classes and Financial Markets	Chapter 3
3.1	**Cash and near cash** On completion, the candidate should:	
3.1.1	know the key features of cash and near-cash assets: • interest rates (including negative interest rates) • cash deposits • money market instruments • money market funds	1
3.2	**Foreign Exchange Market** On completion, the candidate should:	
3.2.1	know the basic structure of the foreign exchange market including: • currency quotes • settlement	2
3.2.2	Be able to calculate a forward exchange rate using interest rate parity formula	2
3.3	**Bonds** On completion, the candidate should:	
3.3.1	know the key features of bonds: • risk • interest rate (including negative interest rates) • repayment • trading • nominal value and market price • coupon • credit rating	3
3.3.2	understand yields: • running yields • yields to redemption • capital returns • volatility and risk, • yield curves	3
3.4	**Property** On completion, the candidate should:	
3.4.1	know the key features of property investment: • direct property • property funds • Real Estate Investment Trusts (REITs)	4

Syllabus Unit/ Element		Chapter/ Section
3.5	**Equities** On completion, the candidate should:	
3.5.1	understand the following types of equity and equity-related investments: • types of shares – ordinary, common, preference, other • American and global depositary receipts • warrants and covered warrants	5
3.5.2	know the benefits of holding shares: • dividends • subscription rights • voting rights	5.2
3.5.3	know the main characteristics of order-driven markets and quote-driven markets	5.3.1
3.5.4	know the differences between principal trading and agency trading	5.3.2
3.5.5	know the implication of trading: • on exchange • over the counter (OTC)	5.3.3
3.6	**Derivatives** On completion, the candidate should:	
3.6.1	know the following characteristics of futures: • definition • key features • terminology	6.1
3.6.2	know the following characteristics of options: • definition • types (calls and puts) • terminology	6.2
3.7	**Commodities** On completion, the candidate should:	
3.7.1	know the main features of commodity markets, and how the physical characteristics, supply and demand, and storage and transportation issues influence prices: • agricultural • metals • energy	7
3.8	**Digital Assets** On completion, the candidate should:	
3.8.1	know the background, key features and risks of digital assets	8
3.9	**Investment Operations** On completion, the candidate should:	
3.9.1	know the implications of holding: • dematerialised or registered investments • Investments in bearer form	9.1

Syllabus Unit/ Element		Chapter/ Section
3.9.2	know aspects of trade settlement: • delivery versus payment • the role of central counterparties	9.2
3.9.3	know the main mandatory and optional corporate actions: • bonus/scrip • consolidation • final redemption • subdivision/stock splits • warrant exercise • rights issues • open offers	9.3

Element 4	Collective Investments	Chapter 4
4.1	**Investment Funds** On completion, the candidate should:	
4.1.1	know the benefits of collective investment	1.1
4.1.2	know the characteristics of types of investment products: • authorised funds and unauthorised funds • open-ended funds • closed-ended investment companies • Undertakings for Collective Investment in Transferable Securities (UCITS) funds	1.2
4.1.3	know the basic characteristics of exchange-traded funds (ETFs) and how they are traded	1.3
4.2	**Other Investment Types** On completion, the candidate should:	
4.2.1	know the characteristics and uses of structured investments	2.1
4.2.2	know the characteristics and uses of hedge funds	2.2
4.2.3	know the characteristics and uses of private equity	2.3
4.2.4	know the characteristics and uses of commodity funds	1.4
4.2.5	know the characteristics and uses of *Sukuk* investments	2.4

Element 5	Economics and Investment Analysis	Chapter 5
5.1	**Macroeconomic Theory** On completion, the candidate should:	
5.1.1	know how national income is determined, composed and measured in both an open and closed economy: • Gross Domestic Product (GDP) • Gross National Product (GNP)	1.1,1.2
5.1.2	know the stages of the economic cycle	1.3

Syllabus Unit/ Element		Chapter/ Section
5.1.3	know the composition of the balance of payments and the factors behind and benefits of international trade and capital flows: • current account • imports • exports	1.4
5.1.4	know the nature, determination and measurement of the money supply and the factors that affect it including Modern Monetary Theory (MMT)	1.6, 1.8
5.1.5	understand the role of central banks	2
5.1.6	know the role, basis and framework within which monetary and fiscal policies operate: • government spending • government borrowing • private sector investment • private sector spending • taxation • interest rates • inflation • currency revaluation/exchange rates/purchasing power parity • quantitative easing	1.6 , 1.7, 1.8
5.1.7	know how inflation/deflation and unemployment statistics are determined	1.5
5.1.8	know the concept of nominal and real returns	1.5
5.2	**Microeconomic Theory** On completion, the candidate should:	
5.2.1	know how price is determined and the interaction of supply and demand: • supply curve • demand curve • reasons for shifts in curves • elasticity of demand • change in price • change in demand	3.1, 3.2
5.2.2	know the theory of the firm: • profit maximisation • short and long run costs • increasing and diminishing returns to factors • economies and diseconomies of scale	3.3
5.2.3	know firm and industry behaviour under: • perfect competition • perfect free market • monopoly • oligopoly	3.4

Syllabus Unit/ Element		Chapter/ Section
5.3	**Statistics** On completion, the candidate should:	
5.3.1	know the following: • arithmetic mean • geometric mean • median • mode (this may be examined by use of a simple calculation)	4.1.1
5.3.2	know statistical measures of dispersion: • variance (sample/population) • standard deviation (sample/population) • range (this may be examined by use of a simple calculation)	4.1.2
5.3.3	understand the correlation and covariance between two variables and the interpretation of the data	4.2
5.4	**Financial Mathematics** On completion, the candidate should:	
5.4.1	be able to calculate the present and future value of: • lump sums • regular payments • annuities • perpetuities (this may be examined by use of a simple calculation)	5.2
5.4.2	be able to calculate and interpret the data for: • simple interest • compound interest (this may be examined by use of a simple calculation)	5.1
5.5	**Fundamental and Technical Analysis** On completion, the candidate should:	
5.5.1	know the difference between fundamental and technical analysis: • primary objectives • quantitative techniques • charts (primary vs secondary vs tertiary movements) • volume • momentum • moving averages and other indicators	6
5.6	**Yields and Ratios** On completion, the candidate should:	
5.6.1	understand the purpose of the following key ratios: • Return on Capital Employed (ROCE) • asset turnover • net profit margin • gross profit margin	7.1

Syllabus Unit/ Element		Chapter/ Section
5.6.2	understand the purpose of the following gearing ratios: • financial gearing • interest cover	7.2
5.6.3	understand the purpose of the following liquidity ratios: • working capital (current) ratio • liquidity ratio (acid test) • cash ratio • Z-score analysis	7.3
5.6.4	understand the purpose of the following investors' ratios: • earnings per share (EPS) • earnings before interest, tax, depreciation, and amortisation (EBITDA) • earnings before interest and tax (EBIT) • historic and prospective price earnings ratios (PERs) • dividend yields • dividend cover • price to book	7.4
5.7	**Valuation** On completion, the candidate should:	
5.7.1	know the basic concept behind: • Economic Value Added (EVA) • Market Value Added (MVA) • shareholder value models including Gordon Growth Model	8

Element 6	Investment Management	Chapter 6
6.1	**Risk and Return** On completion, the candidate should:	
6.1.1	understand the time value of money	4.1
6.1.2	understand the varying investment returns from the main different asset classes – 'risk-free' rates of return and the risk premium	4.2
6.1.3	understand how risk is measured – volatility, the significance of standard deviation as a measure of volatility, the importance and limitations of past performance data	4.3
6.1.4	understand the measurement of total return and the significance of beta and alpha	4.4
6.2	**Portfolio Construction Theories** On completion, the candidate should:	
6.2.1	know the main principles of Modern Portfolio Theory (MPT) and the Efficient Market Hypothesis (EMH)	1.1, 1.2
6.2.2	understand the assumptions underlying the construction of the Capital Asset Pricing Model (CAPM) and its limitations	1.3
6.2.3	know the main principles behind Arbitrage Pricing Theory (APT)	1.4

Syllabus Unit/ Element		Chapter/ Section
6.2.4	know the concepts of behavioural finance: • key properties • heuristics • prospect theory • cognitive illustrations	1.6
6.3	**Investment Strategies** On completion, the candidate should:	
6.3.1	understand the main equity strategies: • active/passive/core-satellite investment • top-down/bottom-up investment styles	2.1
6.3.2	understand the potential importance of ESG considerations	2.2
6.3.3	understand bond strategies	2.3
6.3.4	understand the use of different asset classes within a portfolio	3
6.3.5	understand the use of funds as part of an investment strategy	3, 3.4
6.4	**Performance Measurement** On completion, the candidate should:	
6.4.1	understand how benchmarking can be used to measure performance	5.1
6.4.2	know commonly used performance attribution techniques	5.3
6.4.3	know the concept of: • money-weighted rates of return • time-weighted rates of return	5.2
6.4.4	know the concepts of measuring returns using: • Sharpe ratio • Sortino ratio • Treynor ratio • maximum drawdown	5.4

Element 7	Investment Advice	Chapter 7
7.1	**Advising Clients** On completion, the candidate should:	
7.1.1	know generally accepted approaches to different categorisations of investment clients	1.1
7.1.2	know the definition of 'client's best interest' and the implications of this rule for a financial adviser	1.2
7.1.3	know factors to consider when providing financial advice: • 'Know Your Client' (KYC) and suitability principles underpinning the fiduciary relationship • the nature of the client relationship, confidentiality, trust and client protection • the information required from clients and methods of obtaining it • information about the firm or adviser • monitoring and review of clients' circumstances • additional requirements needed when advising on unregulated retail products	1.3

Syllabus Unit/ Element		Chapter/ Section
7.1.4	know services associated with firms providing: • advice • discretionary and advisory management • execution only	4
7.1.5	know how wealth management services can be paid for: • management fees • transaction charges • financial planning advice • performance-based fees • fees dependent on the nature and frequency of service to be provided	6
7.1.6	know the concept of a 'conflict of interest' and of its significance when giving client advice	4.6.2
7.2	**Determining client needs** On completion, the candidate should:	
7.2.1	know the key stages in investment planning and determining investment objectives and strategy	1.3
7.2.2	know how investment strategy and product selection are influenced by: • ethical preferences • liquidity requirements • time horizons and stage of life • tax status	3
7.2.3	know the purposes, merits and limitations of using questionnaires and interviews to elicit client information	1.3
7.2.4	know the main factors, resources and limitations shaping a client's current and desired financial circumstances: • gather appropriate, relevant information about current and projected income, expenditure, debt and savings • consider time horizons and the relative balance of growth versus income • distinguish between what is essential and what is desirable, and prioritise accordingly • agree clear, feasible, prioritised investment objectives	1.3
7.3	**Taxation** On completion, the candidate should:	
7.3.1	know the application of the main business taxes: • business tax • transaction tax (eg, stamp duty reserve tax) • tax on sales	7

Syllabus Unit/ Element		Chapter/ Section
7.3.2	know the direct and indirect taxes as they apply to individuals: • tax on income • tax on capital gains • state tax • transaction tax (stamp duty) • tax on sales	7
7.3.3	know the principles of withholding tax • types of income subject to withholding tax (WHT) • relief through double taxation agreements • deducted at source	7
7.3.4	know the principles of double taxation relief (DTR)	7
7.3.5	know the implications of domicile, residency status and location of assets	7
7.4	**Risk & Client Suitability** On completion, candidates should:	
7.4.1	know how to assess a client's risk tolerance, capacity for loss, investment experience and the impact of these factors on the selection of suitable investment products	2
7.4.2	be able to analyse a profile of a client's risk exposure and appetite for risk, based on the following objective and subjective factors: • level of wealth • timescale • commitments • life cycle • life goals • investment objectives • attitudes • experiences • knowledge • capacity for loss	2
7.4.3	know the main considerations for investing in accordance with Shariah law and other faith values and those that should be taken into account when investing for charities and trusts	3.5
7.4.4	assess affordability and suitability based on a range of factors including product provider quality, performance, risk, charges and client service	4
7.5	**Planning, Recommendations and Review** On completion, candidates should:	
7.5.1	apply a strategy and rationale that will meet the client's objectives: • highlight the pertinent issues and priorities • formulate a plan to deal with them • offer proposals to achieve these objectives • explain clearly the relative merits and drawbacks of each proposal and combination thereof • agree a strategy that the client understands and accepts	4

Syllabus Unit/ Element		Chapter/ Section
7.5.2	apply an appropriate strategy that best meets the following criteria: • client's financial objectives and priorities • client's risk tolerance • appropriate fees and charges • portfolio turnover ratio (PTR) • client suitability requirements • adequate diversification and correlation benefits • additional risk, timing and liquidity factors where asset • accumulation and decumulation are relevant features	4
7.5.3	understand the factors which influence the way in which recommendations are presented and understand how to check clients' understanding of recommendations	4
7.5.4	assess the factors influencing the choice of benchmark and the basis for review: • portfolio's asset allocation • risk/return profile • alternative investments • taxation • peer groups • maintenance of capital value	4
7.5.5	know the importance of regularly reviewing the client's financial position and the factors that may require changes: • changes in client circumstances • changes in the financial environment • new products and services available • administrative changes or difficulties • investment-related changes (eg, credit rating, corporate actions) • portfolio rebalancing • benchmark review	5

Element 8	Lifetime Financial Provision	Chapter 8
8.1	**Retirement Planning** On completion, the candidate should:	
8.1.1	understand the impact of intended retirement age on retirement planning	1.2
8.1.2	know the types of retirement planning products, associated risks, suitability criteria and methods of identifying and reviewing	1.3
8.1.3	be able to calculate the financial needs for retirement	1.4
8.1.4	know the elements to be included in a recommendation report to clients	1.5

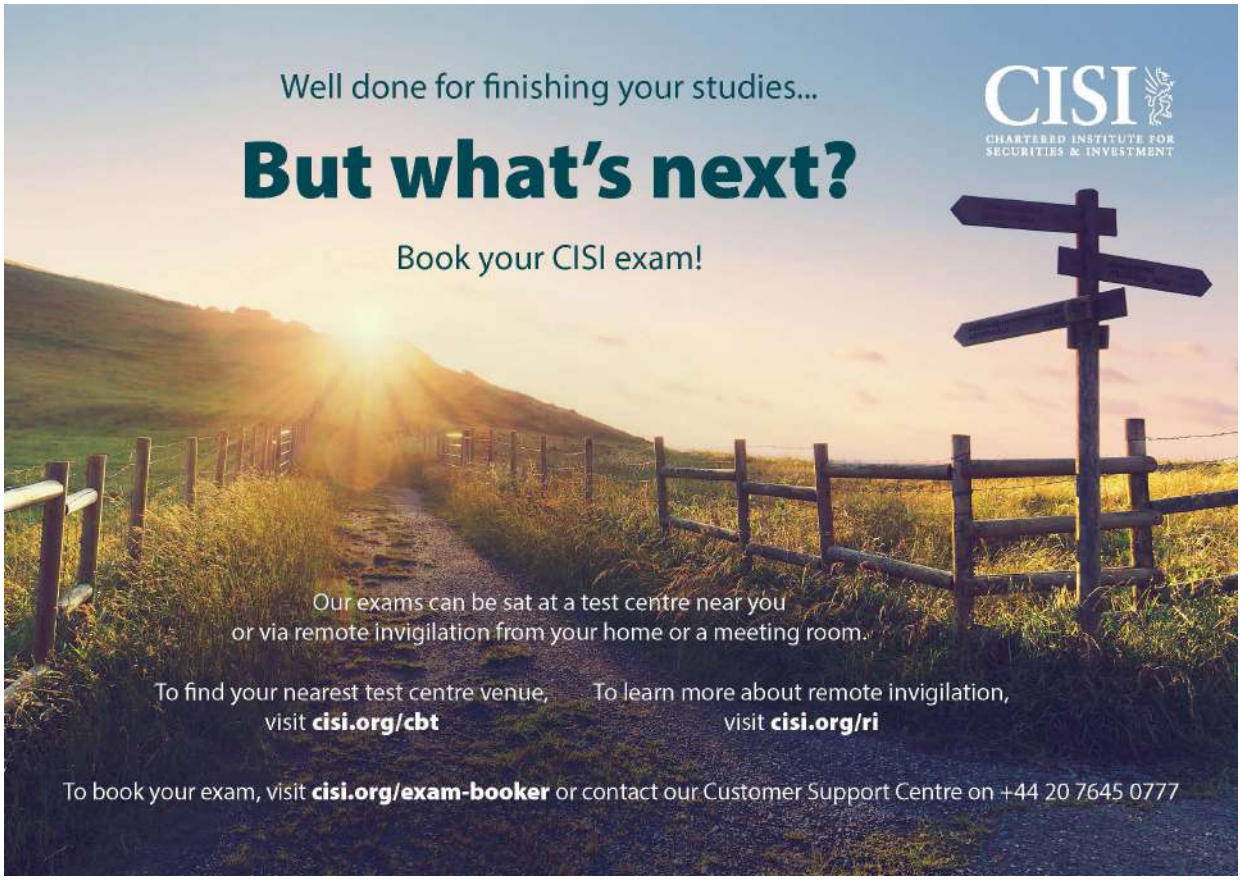
Syllabus Unit/ Element		Chapter/ Section
8.2	**Protection Planning** On completion, the candidate should:	
8.2.1	know the main areas in need of protection: • family and personal protection • mortgage • long-term care • business protection	2.1
8.2.2	know the need for assessing priorities in life and health protection – individual and family priorities	2.2
8.2.3	understand the requirement for prioritising protection needs	2.2.1
8.2.4	understand how to quantify protection needs	2.3
8.2.5	know the basic principles of life assurance: • types • proposers • lives assured • single and joint life policies	2.4
8.2.6	know the main product features of: • critical illness insurance • accident and sickness protection • medical insurance • long-term care protection	2.5
8.2.7	know the main product features of business insurance protection: • key person • shareholder • partnership	2.5.5
8.2.8	understand the factors to be considered when identifying suitable protection product solutions and when selecting product providers	2.6, 2.7
8.2.9	know the elements to be included in a recommendation report to clients	2.8
8.3	**Estate Planning, Trusts and Foundations** On completion, the candidate should:	
8.3.1	understand the key concepts in estate planning: • assessment of the estate • power of attorney • execution of a will • inheritance tax • life assurance	3.1
8.3.2	know the uses of family investment vehicles: • trusts and the types of trust available • offshore trusts • offshore foundations • investment companies	3.2

Examination Specification

Each examination paper is constructed from a specification that determines the weightings that will be given to each element. The specification is given below.

It is important to note that the numbers quoted may vary slightly from examination to examination as there is some flexibility to ensure that each examination has a consistent level of difficulty. However, the number of questions tested in each element should not change by more than plus or minus 2.

Element Number	Element	Questions
1	The Financial Services Sector	4
2	Industry Regulation	5
3	Asset Classes and Financial Markets	14
4	Collective Investments	7
5	Economics and Investment Analysis	21
6	Investment Management	15
7	Investment Advice	21
8	Lifetime Financial Provision	13
Total		**100**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Understand AML legislation and regulation, the role of the MLRO, and the sanctions and penalties.

Client Assets and Client Money Essentials
Gain an overview of the principles and high-level rules associated with holding and protecting client assets.

Conflicts of Interest
Consider examples of conflicts of interest, tools, policies and procedures, enforcement action, and good practice.

Data Science
Digitisation of business operations has accelerated the speed of data capture. Harness the value of your data.

Diversity and Inclusion
Targeted at those responsible for diversity, equality and anti-discrimination, and those recruiting and managing.

Financial Crime
Gain an overview of insider dealing, market abuse, money laundering, terrorist finance and financial sanctions.

Financial Planning
Gain an overview of the financial planning process, key terms and the regulatory framework that governs it.

Greenwashing
This module explores the key concepts surrounding greenwashing, the wider implications, and the measures being taken to fight it.

Impact Investing
Aim to take ethical and sustainable investment principles a step further through intentional investment.

Integrity and Ethics
Understand ethics in finance, the importance of trust and trustworthiness, and compliance versus ethics.

Market Abuse
Examine offences, penalties, safe harbours, reporting obligations and the relationship with other offences.

Neuroscience at Work
Learn how to work optimally without harming your health when faced with increased workloads and deadlines.

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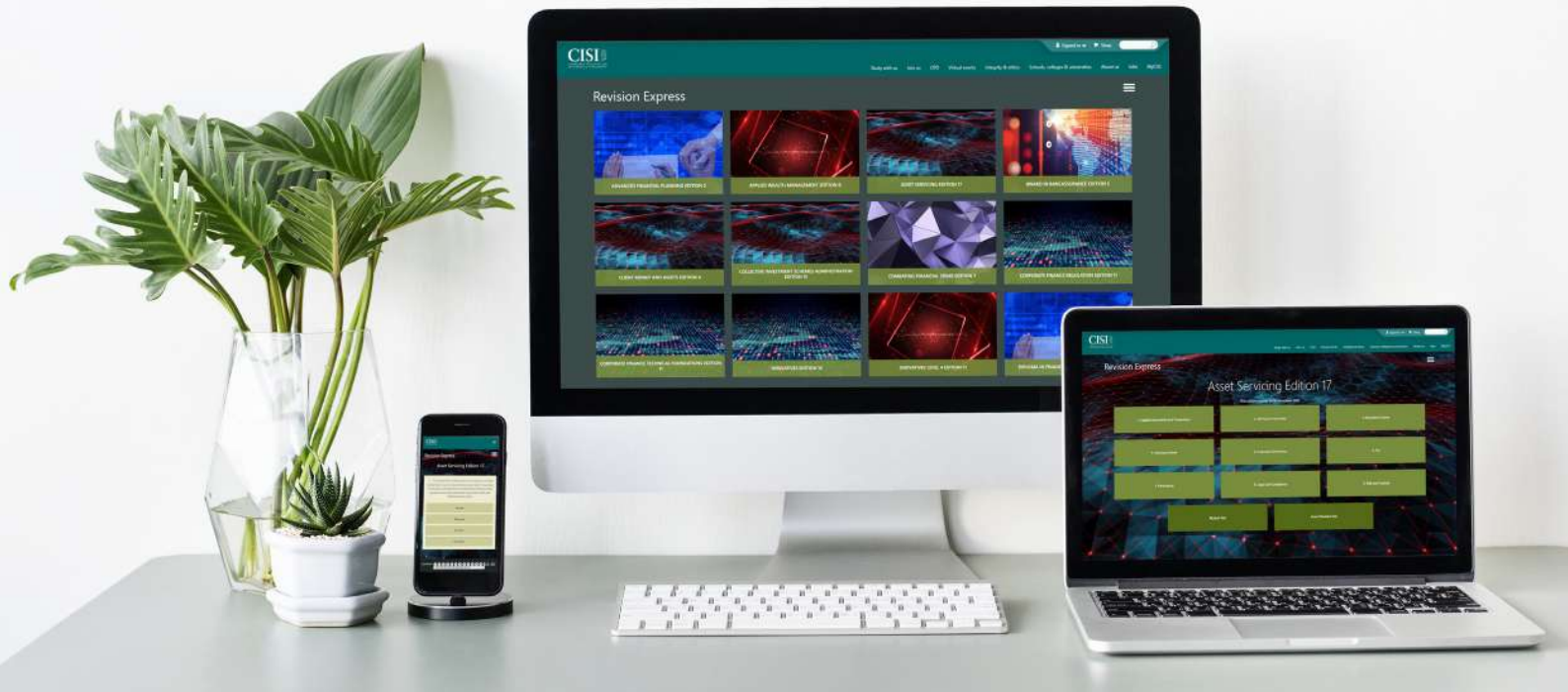

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