Long / Medium Term Capital

The following are the main sources, in order of decreasing expected return.

Shares

Equity shareholders own the company and are entitled to all its net profits after interest on stock and loans has been paid. This is in the form of a cash divaden the remainder being held as reserves or to finance company activities. Initial running yield is low, but increases usually outpace inflation and shareholders ge an additional return through the increase in market price of the shares.

Marketability varies with company size, but is generally better than other form of capital. Reasons are that usually the issue of shares is large, there is only one type of share, and investors like to buy and sell shares frequently.

Shareholders get voting rights in proportion to the shares held, and have the right to speak at company meetings and recieve the annual report and accounts.

Nonstandard Shares

These include deferred shares (no payment until a condition is met), redeemable shares (repaid at a certain date), non-voting shares, shares with multiple voting rights and golden shares in newly privatised industries.

Preference Shares

Preference share dividends are limited to an amount which must be paid before ordinary dividends. This effect is often cumulative. Because of their specialised nature, their marketability is worse than ordinary shares. Their after-tax return is also often lower than loan capital for non corporations. Preference shares may be non-cumulative, redeemable, participating (entitle to a share of profits when ordinary dividends exceed an amount) or stepped.

Unlike shareholders, holders of loan capital are considered creditors of the institution. They recieve a stream of interest payments (specified at onset) until the time the capital is returned (also specified). In most cases a trustee looks after their interest ensuring that the obligations in the trust deed are met. This includes what rights the company has to issue further bonds, how far profits may fall before consulting loan capital holders and how assets should be distributed on windup.

It is conventional to issue loan capital at a price close to par and redeem it at par, usually in units of 100. Interest payments are expressed as a proportion of par. Long, medium and short term loan capital are called stocks, bonds and bills.

There are several types of loan capital - Unsecured Loan Stock, Eurobonds and Debentures. They are issued by both corporations and governments. Corporate bonds are more risky and less marketable, and thus tend to have larger yields. As government securities are almost risk free, governments don't offer debentures.

Unsecured Loan Stock

If the company defaults, you can only get your money by suing them - in practice asking courts to wind up the company. Corporate bonds have a similar marketability to preference shares. Government bonds, on the other hand, are highly marketable due to their low risk and large issue size.

Eurobonds

These are issued outside the legal or tax jurisdiction of any country. They are bearer documents from which the holder must cut coupons for the annual interest payments. They are a convinient way to raise large amounts of foreign currency (minimum issue $75m) without having to enter foreign financial markets. Their marketability is high.

Debentures

Debentures are secured on the assets of the company - if the company fails to make a coupon payment, they may intercept income from the asset, or take possession and sell it to meet their debt.

A morgage debenture specifies the asset, while a floating charge debenture allows the assets to change with trustee agreement. On failure of payment, debentures can apply to the courts to 'crystallise' the floating charge.

Debentures are very safe, only carrying the risk that capital and interest charges are eroded by inflation. Their marketability is similar to unsecured loan stocks.

Convertables

These are unsecured loan stocks or preference shares that may convert into a specified number of ordinary shares of the issuing company at certain dates. From the investors viewpoint, convertibles combine the low risk of preference shares or loan stock with the potential for large gains of an equity. This gives them their low expected return.

As the date of conversion draws nearer, the behaviour of the convertable's price becomes closer to the security it will become.

Short Term Capital

The following are the main sources, in order of decreasing expected return

Overdraft

This is where a bank allows a customer to withdraw money so their current account balance becomes negative, down to an agreed limit. The borrower pays variable interest on the amount by which they are overdrawn. A bank may demand immediate repayment of the overdraft without notice.

Bank Loan

The borrower recieves the full amount of the loan and undertakes to make interest and capital repayments on it. All assets of the company are assigned as securi

Variations include loan facilities (cross between loans and overdrafts), multicurrency loans (the bank borrows the best value currency and converts to sterling) and syndicated loans (loans provided by a number of banks)

Commercial Paper

These are bearer documents for at least 100,000 issued at discount and redeemed at par Security is provided by the issuer. To issue paper, companies must be listed on the stock exchange, have 50 m net assets and issue a statement saying they comply with stock market rules and there have been no adverse changes since the last published accounts which complied with stock market rules.

Government bills

These are bearer documents issued at discount and redeemed at par. Yield on bills is typically quoted as a simple rate of discount for the term of the bill.

Finance in Trading

Leasing

An agreement where the asset's owner gives the lessee the right to use the asse over a period of time in return for a regular series of payments. Under an operating lease, the owner retains most risks and the lease is substantial shorter than the asset's life. Under a finance lease, the lessee takes on most risks, and the lease period is similar to the assets life.

Hire Purchase

An agreement to hire goods for a period of time, making regular retail payments, then to buy the goods at the end of the retail period. If the buyer fails to make payments, the seller can take back the good.

Credit Sale

A credit sale is a normal sale of a good with an agreement that payment will be made by a series of regular installments. If the buyer defaults, the seller can sue for payment through the courts.

Trade Credit

An agreement between a company and a supplier to pay for goods and services after they have been supplied. In most cases no explicit interest is charged.

Factoring

Non-recourse factoring is where the supplier sells trade debts to a factor in orde to obtain cash payment before their due date. The factor takes responsibility for credit analysis, payment collection and credit losses. Recourse factoring only provides early invoice payment.- it is a loan which is secured against invoices sent out. Credit risk remains with the original supplier.

Bills of Exchange

A bill of exchange is an invoice endorsed by a merchant bank which can be sold to raise short term finance. Where the endoriser is an eligable bank (where bills can be sold to the bank of England) the bill is known as an eligable bill of exchange. and is very secure. They are known as two-name pap

Miscellaneous Investments

Cash on deposit

Another name for a bank account - investors can choose when to invest or disinvest and will recieve interest additions during the period of investment.

Certificate of deposit

A certificate issued by banks and building societies stating that money has been deposited. Interest is payable on maturity in 1 to 6 months. There is an active secondary market.

Property

Return comes from rent and proceeds on sale. Rents are reviewed every three to five years and are expected to increase broadly with inflation.

Property has large unit sizes, is expensive to trade and hard to value, and rent is reduced by maintainance expenses and periods when the property is unoccupied This means that the running yield tends to be higher than dividends.

Morgage

A loan repayable by a series of payments that include partial repayment of loan capital in addition to interest payments. The first repayment will consist almost entirely of interest payments, the final almost entirely of capital.

Interest only

A loan repayable by a series of interest payments followed by a return of capital.

Endowment

This provides a lump sum on death of the policyholder or at the end of the term, and is usually paid for by a series of level payments up to that point.

Term Assurance

This provides a lump sum if the policyholder dies during the term. It is usually purchased by annual premiums (often level) ceasing on death.

Motor Insurance

In return for a premium, the insurance company accepts financial risks associated with the policyholders motoring. Note that in many cases the insurance companies negative cashflows occur after the conclusion of the period of cover.

Annuity

This provides a series of level payments in return for a single lump sum, usually until death although maximum and minimums are often included.

Business Entities

A sole trader is a business owned by one person which is not a limited company. Sole traders have unlimited liability for business debts.

A partnership is a business owned by more than one person which is not a limited company. Partners are jointly and severally liable for business debts. Often a partnership agreement sets out the rights of individual partners.

⊕ Creditors are better able to ensure payment
⊕ Investors must take an active interest in the companies long term welfare

A limited company is a business set up under the companies act, giving it a legal identity separate from the owners (called shareholders). These appoint directors to run the company and have liability limited to the fully paid up value of their sh

⊕ Easy to raise capital - important for risky businesses and those needing lots of money

Public Limited Companies must have a Memorandum of Association which states it is a public company, an issued share capital of at least 50000 and be correctly registered with the registrar of companies. It's name must end with public limited comp The rest are private limited companies whose names must end with limited.

⊕ Public Limited Companies may have a full stock exchange listing.

Other types of companies include companies limited by guarantee, companies established by royal charter and close companies (companies under the control of five or fewer people - these include limited companies)

The Memorandum of Association states how the company will deal with the world. It is created before the company is set up and is hard to change. It includes

- The name of the company
- The objectives of the company
- The country where the registered office is located
- The names of the directors

- A statement that shareholders have limited liability
- For a public company, a statement to that effect

- The total registered share capital
- The nominal value of a share
- The names, share holdings and signatures of the initial subscribers

The Articles of Association gives internal rules and regulations by which the directors run the company and states the rights owners of different classes of share capital have. The Articles can be changed relatively easily.

Obtaining a Stock Exchange Listing

A company may want to obtain a listing for the following reasons

- To let it sell shares to a wide market and thus get large sums of money cheaply.
- To decrease the cost of borrowing by following stock exchange rules
- To provide an exit route for investors who want to sell their shares

In addition, ease of valuing shares means they're useful as backing for borrowing, more useful on a takeover bid and better in employee share schemes

Offer for Sale at a Fixed Price

A number of shares is offered to the public via an issuing house. The issuing ho (usually part of a merchant bank) buys shares from the company and sells them to the public, thus underwriting the company. (They usually arrange sub-underwriting for themselves with pension funds, life assurance companies, etc.) They act as advisors try and ensure good pre-launch comments and advise on the (usually conservative) pric

A formal prospectus is made available, containing company activities and finances, reasons for and price of issue and an application form. This or an offer of notice mus be put in at least one national newspaper. Applications can typically be made for a wee

Assuming the offer is over subscribed, the issuing house decides which offers to accept, balancing securities being widely held against administration cost. Letters o acceptance and refund cheques are sent appropriately.

Offer for Sale by Tender

This is similar to offer for sale at a fixed price, except applicants must state the price they are willing to pay. The issuing house will determine a strike price and all applicants who bid as much have their applications accepted at that pri

The Stock Exchange does not normally allow a quotation involving more than 50m of shares to be made without an offer of sale. For quotations involving smaller amounts, the following are sometimes used.

Introduction

This will not be allowed unless over 25% of the shares are in public hands. No shares are sold but existing shares will be quoted in the future. This typically occurs when overseas companies want a UK listing or where a listed company demerges.

Offer for Subscription

These are similar to offers for sale except the issue is not underwritten - the company sells direct to the public. These are often used where it is uncertain if investors will want to buy shares, and allow the company to pull out. An issuing company will typically still act as an advisor

Placings

As with an offer for sale, the issuing company buys the securities. It then individually approaches institutional investors such as pension funds and life offices. No public applications are invited.

Issue of Shares

Rights Issue

This is an offer of shares to shareholders in proportion to their holdings. Prices are at a discount to market price. Companies thus prefer a high market as this gives them more money per share sold.

The company discusses the possibility with their merchant bankers, then publish a rights offer document explaining why the offer is being made. Shareholders are sent personal allotment letters and shares start to trade ex-rights. Shareholders are given three or more weeks to accept the offer or trade their nil paid rights.

The theoretical effect of a rights issue is that shares are created, the value of the company is increased by the new money raised and share price drops to the theoret

ex-rights price = proportion old shares × price old shares + proportion new shares × price new sh

In practice we need to consider expenses and the reaction of the market. The latter is sensitive to the reasons for issue, and the new perceived company sh The share price almost always drops following an issue due to a glut of shares, and the loss of favour due to asking for more money.

Rights issues do not need to be underwritten, particularly if shares are offered at a deep discount.

Scrip Issue

Here free shares are given to shareholders in proportion to their holdings.
The effect is new shares are created, shares are worth less and reserves become share capit

The only concrete reason is that several laws have share capital hurdles.
The remainder are psycological - improved marketability, proof of past profitability
showing future confidence. (rights issues imposed by fall in share price) and
shareholders like free shares - all of which hopefully help the share price.

Downsides include company expenses and the cost to shareholders in administration.

Share buyback

The company announces it intends to buy back a number of its own shares.
It can do this through tender, on the open market or asking major shareholders.

The effects on earning per share should be beneficial. However it can be seen as
a sign of weakness as the company can't find better uses for the money.

Dividends

The decision of what dividend to pay is a financing issue, particularly for unlisted companies who have a restricted number of ways of raising capital - any money paid out is unavailable for investment in the company.

In choosing dividend size, companies trade current investor income for higher future income. In doing this, they must consider who their investors are - if there is a large proportion of non-tax payers then high dividends avoid capital gains, conversely high growth companies prefer low dividends to frequent rights issues.

Another key aspect is stability - any changes in dividend policy causes an adverse reaction as investors adjust their portfolios. Similarly, dividend cuts are viewed badly, so managers are advised to be conservative in good years.

One final point to consider is the companies reserves - companies with large reserves are more likely to be taken over, and so may be generous to encourage shareholder loyalty and limit the size of the cash pile.

Companies who cannot afford cash dividends may pay scrip dividends. These may be pure or with an option to take cash instead. They are equivalent to ordinary dividends (possibly of size zero) followed by a rights issue for the amount of cash just given out.

Income Tax

Individuals assign their income from 6 April to 5 April into the tax bands personal allowance (max 4535), lower rate (max 1880), basic rate (max 275 and upper rate in the following order

Non Savings Income	0%	10%	22%	40%

This includes salary, benefits in kind (company car, medical insurance, etc), income from self-employment and property, and capital gains if done commercially

Savings Income	0%	10%	20%	40%

This includes bank and building society interest, gilts and bonds. Tax is usua deducted at source at 20% and can be offset against tax liability.

UK Dividends	10%	10%	10%	32.5%

Tax is usually deducted at source at 10%.

The following income is not taxable

- Profits from gambling
- Most forms of social security benefit
- Income from TESSAs, PEPs, ISAs and national savings

In addition, various allowances such as age allowance are added to the personal allowance, and tax relief on certain forms of expenditure reduces a persons taxable income.

Capital Gains Tax

You do not have to pay capital gains tax on the following

- Small, tangible, moveable assets worth less than 7500.
- A main private residence
- A private motor car
- Government securities and certain other fixed interest stocks
- Foreign currency obtained for personal use
- Transactions between a husband and a wife.

For companies, a chargable gain = sales price - purchase cost - indexation
If bought before 31 March 1982 you may use the value then.
The indexation allowance adjusts for costs of enhancement and changes in RPI.

$$IA = \text{purchase cost} \times \frac{RPI(\text{date of sale}) - RPI(\text{date of purchase})}{RPI(\text{date of purchase})} + \text{enhancement cost} \times \frac{RPI(\text{date of sale}) - RPI(\text{date of enhance})}{RPI(\text{date of enhance})}$$

Individuals recieve indexation allowance up to 5th April 1988 and recieve taper relief from that date. - a percentage reduction in the amount of tax to be paid. The relief is higher for business assets, including non-shares used for the purpose of a trade or profession and shares held of qualifying companies.

Capital losses (which you are not allowed to use indexation to create or expand) may be offset against capital gains, but no other form of taxation.

Individuals pay capital gains tax at their marginal rate and companies add it to their income to give their taxable profits.

Corporation Tax

Most companies pay tax on profits during their accounting year. This often differs the financial year (1 April to 31 March) during which a given tax rate applies. However, from April 1998, large companies were required to pay corporation tax on a current year basis by quarterly installments - like PAYE but for compan

Taxable profits include both capital gains, and income less expenses. The latter of these may be offset against capital gains if negative. The starting point for calculating this is 'profit on ordinary activities before taxation' and 'extraordinary profits in the companies profit and loss account. To this we must

- Add back any non-tax-allowable business expenses
- Add back depreciation charges and instead subtract IR depreciation
- Deduct franked investment income (tax already been paid)

We then deduct the corporation tax rate from this value - 30% in 2001/2002.

Certain companies have slightly different tax arrangements

Life insurance company

Activities are split into funds, and expenses in one are not allowed to offset tax in another. Main funds are pensions business and life and general annuity business.

Pensions business is calculated on a profit basis, where profits are calculated as premiums + investment income + premiums - payments - expenses - increases in reserves.

Life assurance business and general assurance business are taxed on a different basis investment income + realised capital gains - expenses - income element of annuity payment Note that premiums and payments to policyholders do not enter the 'I-E' basis.

Traders in Securities

Capital gains are included in taxable profits without indexation allowance and their liability extends to gilts and other qualifying fixed interest securities.

Miscellaneous Tax

Other categories of tax include

- Stamp duty on contract documents
- Value added or sales / turnover taxes
- Inheritance taxes
- Property taxes
- Customs duties

The Inland Revenue has double taxation agreements with many countries which allow tax paid overseas to be offset against their liability to UK corporation (or income) tax on that income.

Bank of England

This is the UKs central bank. It is an agent of the government and its jobs include issuing bank notes, formulating and executing monetary policy on behalf of the government, running the government bank account for expenditure and tax receipts and acting as a banker to banks.

Money Markets

These cover bank deposits and short term securities (treasury bills, bills of exchange) The Bank of England does the following

- Licences clearing banks and maintains their solvency and compliance with the banking ac
- Has designed and built a settlement system for money market transactions
- Issues treasury bills in a weekly auction to cover government short term funding
- Acts as lender of last resort to prevent banks running out of money causing financial panic
  - lends cash against bills held as security.
  - purchases bills with a simultaneous agreement to sell them later
- Uses rates it lends against and sells bills for to influence short term interest rates.

Gilt-Edged Market

The Bank of England only deals with GEMMs (gilt edged market makers) in gilts, which it licences and partially monitors. In return they get favourable tax treatment. It also has a settlement system for gilts and eurobonds and keeps a register of gilt owners.

When the government has a public sector borrowing requirement it instructs the Bank to sell gilts. This is done by offers for sale, auctions, tenders, tap stocks (selling stocks from undersubscribed offers for sale to GEMMs) and tuplets or tranchettes (ordinary stock like tap stoc

Rather than having to find a large sum of money when a gilt matures, the Bank of England buys back gilts before maturity. It may also do this if the government is running a public sector debt reduction.

Currency Market

The Bank of England maintains large amounts of foreign reserves (gold and foreign curr
By buying or selling sterling, the Bank of England can manipulate the exchange rate.

The Stock Exchange

The stock exchange's role is to provide a primary market for companies and governments to raise new finance and to provide a secondary market for investors.

It deals in gilts, local authority bills, bulldogs (unsecured loan stock from a foreign borrow shares, preference shares, debentures, unsecured loan stock, Eurobonds, split into four market Gilt Edged, UK fully listed securities, Alternative Investment market and overseas securities.

It is responsible for regulating

- The market, to ensure orderly business and investor protection
- Its members, to ensure professional standards
- Companies, to ensure listed shares are on the basis of complete information

It is responsible for settlement of equities within three working days (using a computerised system called CREST) and settlement of gilts one day after the deal (done manually).

It is responsible for providing investors with information, including

- TOPIC a computerised information system.
  - SEAQ Stock Exchange automated quotations
- SEDOL - stock exchange daily official list. This shows price and volume of the days trading and is used by IR as the basis for capital gains tax
- Stock exchange. year book gives information on companies
- FTSE Actuaries Indices

The main leaders are pensions funds, life assurance offices, individuals, general insurance companies, unit trusts and investment trusts in that order.

Institutional Investors

Listed in order of approachability by an individual

Discount houses

These used to be the equivalent of GEMMs for bills. Their roles included

- Acting as a counterparty to the Bank of England in money market transactions.
- Making market in bills
- Participating in underwriting weekly Treasury bill auctions
- Taking deposits at call from banks.

In 1988, the Bank of England allowed other institutions to do the same job, and they no longer exist as a separate institutional group.

Merchant Banks (Investment Banks)

Their main role is as financial advisors to companies, including advice on takeover mergers and defences against these, investment projects and the best ways to raise capital. They act as issuing houses, arrange underwriting of new issues and provide short and long term capital. Conversely, they hold bills, guarantee bills of exchange and issue certificates of deposit. They issue Eurobonds and organise the Eurobond market.

They also provide fund management for unit trusts, investment trusts, pension funds and large private investment portfolios and act as trustees, for example for debentures.

Investment Trusts

These are companies which make money by investing. They are set up like an ordinary company - a board of directors decides policy, investment managers invest and the shareholders own it all and recieve the profits.

For limited life investment trusts (with a set winding up date) there may be two or more shares aimed at investors with different tax positions

- Capital Shares - little or no income, recieve capital on windup.
- Income shares - income, little or no capital recieved on windup.

Investment trusts have an objective which determines which markets it targets. A number specialise in assets that small investors find it hard to invest in directly

In practice, many investment trusts stand at a discount to their net asset value due to management charges and lower marketability

Unit Trusts

These are trusts set up and run by a management company. Trustees check that the trust is run according to the trust deed and investors buy units in it. There are restrictions on unit trust investments, so they usually invest only in shares.

To buy a unit you must typically pay 6% over the value = $\frac{\text{market price}}{\text{num units}}$ - this goes to the management company. Moreover, there are two ways to calculate prices - offer pricing (cost of buying assets, used when expanding) and bid pricing (cost of selling assets, used when contracting) which give an extra 5% loss.

Self Administered Pension Schemes

This is an employee pension scheme responsible for its own investment strategy. Employers and employees make contributions, trustees run the fund and ensure members pensions are safeguarded and Fund managers invest the funds.

A pension fund will reflect its liabilities - long term inflation related. It invests mainly in equities and in some long dated gilts and company debt. In the fixed interest market it invests in long and some medium bonds, primarily high coupon stock

Life Insurance

These pool mortality and investment risk for endowments, term assurance, personal pensions and annuities). Its liabilities in non-profit and the guaranteed part of with profits are fixed, but the bonus with profits part need to be inflation related.

Legislation requires them to maintain an excess of assets over liabilities, so these tend to be matched closely. Thus they invest in a mix of shares and fixed interest securities. In the fixed interest market they invest in long and some medium bonds, primarily low coupon stock for favourable after-tax performance.

General Insurance

These provide cover by pooling a variety of risks. Because they provide short term cover with a variable claim amount and claim numbers, their liabilities are almost all short term and do not take too much investment risk. They may also invest large amounts in UK equities and oversea securities, the latter to back non sterling policies. In the fixed interest market they buy short and medium dated bonds.

Clearing Banks (High Street Banks)

These obtain the bulk of their finance from private individuals through high street outlets and provide means for their customers to transfer money to third parties.

Banks use some money in bank loans with a term of a few years. However the majority of their money is leant on shorter terms to maintain liquidity. In particular they lend and borrow a lot of capital with other banks. The amount at which they are prepared to lend money is the London inter bank offered rate or LIBOR and the rate at which pay to borrow is the London inter bank bid rate or LIBID. The difference is the margin for the specialist money brokers that they use.

The banks dominate the money market, the certificates of deposit market and the Eurobond market. They are important in bill markets, and play a minor role in short or medium term gilts.

Banks are increasingly becoming middlemen in unit trust, investment trust and life assurance and pension plan markets.

Building Societies

These are similar to banks, except

- They haven't entered the commercial money markets to the same degree
- Lending is dominated by house purchase mortgages with some personal loans.
- They are smaller than banks.

They typically invest in short dated gilts (unusual) and local authority bonds.

Company Annual Reports and Accounts

Companies are required to produce annual reports and accounts for

- Equity investors — Investors require information about profits and cashflows. Existing shareholders require information about transactions for stewardship purposes.
- Loan creditors — A lender wants to know if the company can generate enough to repay the loan and has an adequate asset base to meet obligations
- Employees — Interested in the ability to pay salaries and offer job security.
- Business contacts — These are interested in continuity of orders for materials and services (from suppliers) and continuity of sales (to customers)

In addition, they will be used by

- The stock exchange to ensure requirements are met
- The inland revenue as a starting point when calculating tax liability.
- The credit rating agencies to assess company credit worthyness
- The management as a source of information
- Stock analysts to fine tune performance forcasts
- Government agencies
- Competitors and potential creditors.

The report must include

- Balance sheet.
- Profit and loss account
- Cashflow statement
- Detailed disclosure
- Directors report
- Auditors report (Report to shareholders to add credebility to accounts).

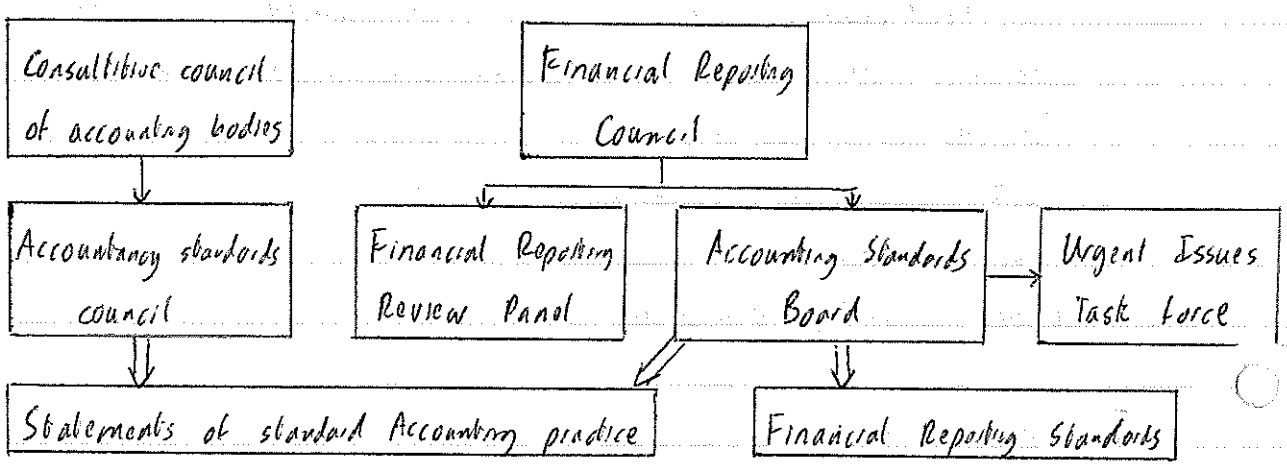
The annual report and accounts must follow

- UK Professional Standards
- UK Companies act
- Stock Exchange Requirements
- Other Legislation

and should be guided by

- Principles, concepts and conventions
- Good practice by leading companies.

Accounting standards are given by the following structure.



Accounting Concepts

The most important of these have been marked with a cross

⊗	Consistency	Figures should be comparable from year to year.
⊗	Prudence	In cases of uncertainty, choose the less optimistic result.
o	Materiality	Do not provide detail which confuses issues.
⊗	Going Concern	Assume the business will continue in its present form indefinite
o	Money Measure	Restrict the focus to matters which can be measured in money
o	Cost Concept	Fixed unmarketable assets should be based on the value paid for the
o	Matching	Associated income and expenses should be written down consistantly and over the same time period
⊗	Accruals	Expenses are written down when they occur, not when paid
o	Realisation	Income is written down when it occurs, not when paid.
o	Business Entity	The business and owners affairs remain separate
o	Dual Aspect	All transactions added two numbers (double entry bookkeeping)

Miscellaneous Accounting

Depreciation

This is the measure of wearing out, consumption or other reduction over the useful life of a fixed asset. We use the straight line or reducing balance method.

Revaluation Reserve

If we value something and find it's value has changed, we might adjust its valu and depreciation and put the value gained or lost in the revaluation reserve.

Share Premium

This contains any excess in money paid for shares over their nominal value.

Maximum Dividend

To protect creditors, the maximum dividend is the balance of the profit and loss account.

Subsidary Companies (> 50% shares)

A holding company (one with subsidaries) is required to publish accounts for the group. In these, the value of share capital and reserves provided by the subsidary's minority shareholders is called the Minority Interest.

In many takeovers, the cost of acquisition is greater than the book value of the shares acquired (proportion of share capital and reserves of taken over company). This excess is called goodwill, and should be written off over its useful life (usually 20 years at most)

Associated Companies (20% - 50% shares)

The holding company should include its share of results in the profit and loss account and its share of the net assets in the balance sheet of the consolidated accounts.

Other Companies

Pension Funds

The majority of a pension funds liabilities are long term and impossible to quantify exactly. This makes the balance sheet and profit and loss account useless. Instead we remove the pensioners liabilities to give a statement of net assets and a fund account, and perform an actuarial valuation periodically to demonstrate solvency of the fund and determine the future contribution rate.

Insurance Companies

These have problems because their liabilities, though short term, are hard to quantify - there is a conflict between prudence for policyholders and the need to give a fair view of future profitability for investors. This conflict is often addressed by producing a set of accounts for each.

Trial Balance

This lists the totals created by double entry bookkeeping (hence the total of each column should be the same). Every figure in the trial balance is used once when creating the accounts.

The debit column holds value owned by or owed to the company, the credit colum value owned by or owed to others. These others include shareholders, so for exam the company owes them 'sales', but is owed the cost of sales

	Debit	Credit
Cash	50	
Capital		50
Loan		100
Stock	100	
Cost of Sale	100	
Debtor	100	
Sales		200
	350	350

Balance Sheet

This lists everything owned and owed by the business

Fixed Assets	A
Intangible	
Tangible	
Long term investments	
Current Assets	B
Stocks	
Debtors	
Cash	
Short term investment	
Current Liabilities	C
Loan / Overdraft	
Creditors	
Tax / Dividend Provision	
Net Current Assets	B - C
Total Assets less Current Liabilities	A + B - C
Long term Liabilities	D
Long term Loans	
Other Provisions	
Total Assets less Liabilities	A + B - C - D
Capital and Reserves	A + B - C - D
Issued Share Capital	
Share premium Account	
Revaluation Reserve	
Profit and Loss Account	

Profit and Loss Account

This compares the income generated from trading with costs associated with earning that income.

Turnover	A
Cost of goods sold	B
Gross Profit	A - B
Non trading Expenses	C
Operating Profit	A - B - C
Non trading Income	D
Net profit before interest and tax	A - B - C + D
Interest	E
Net profit before tax	A - B - C + D - E
Tax	F
Net profit after tax	A - B - C + D - E - F
Dividends	G
Retained Profits this year	A - B - C + D - E - F - G
Retained profit brought forward	H
Retained profit carried forward	A - B - C + D - E - F - G + H

Cashflow Statement

Despite being profitable, a company may run into liquidity problems if it is unable to realise that cash. The cashflow statement shows such problems.

Operating Profit
+ Depreciation
+ Increase in creditors
- Increase in stock
- Increase in debtors
= Net cash inflow from operating activities

+ Non trading Income
- Interest paid
- Taxation
- Dividends
- Increase in fixed assets
+ Increase in loans
= Increase in cash.

Performance Ratios

- Profit Margin = $\frac{\text{Operating Profit}}{\text{Turnover}}$

A low profit margin may indicate a downmarket product, a high volume strategy, an attempt to increase market share, or subnormal profits.

- Return on Capital Employed = $\frac{\text{Net capital before tax and interest}}{\text{Share capital + reserves + long term debt}}$

This is the most important ratio and measures the relationship between the amount invested and the returns generated. It can be compared with the cost of borrowing.
It must be consistent - iff an assets income is above the line the asset must be below it.

- Current Ratio = $\frac{\text{current assets}}{\text{current liabilities}}$

Whether the company will be able to pay its bills over the next few months.
The 'correct' value depends on the stability of the business, but 2:1 is considered good.

- Quick Ratio = $\frac{\text{current assets - stocks}}{\text{current liabilities}}$

What would happen if all creditor and debtor accounts were settled immediately.

- Stock Turnover Ratio = $\frac{\text{stocks}}{\text{turnover}} \times 365$

How long stock is held for, on average. This ignores the difference between cost of production and selling price

- Debtors Turnover Ratio = $\frac{\text{Debtors}}{\text{credit sales}} \times 365$

How long before debtors settle their bills, on average. If sales cannot be broken into cash and credit sales the ratio will be distorted.

Loan Capital Ratios

- Income Cover = $\frac{\text{Profit on ordinary activities before interest paid and taxation}}{\text{annual interest on loan stock of same or higher priority}}$

This measures how often the company could pay interest out profit

- Asset Cover = $\frac{\text{total assets - intangiable assets - current liabilities}}{\text{loan capital of same or higher priority}}$

This measures the assets availible to meet stockholders demands for repayment if the company were to wind up.

- Income Priority Percentages = $\frac{1}{\text{Income cover at next level up}}$ to $\frac{1}{\text{Income cover}}$

- Asset Priority Percentages = $\frac{1}{\text{Asset cover at next level up}}$ to $\frac{1}{\text{Asset cover}}$

Also consider Asset and Income gearing levels, which are the reciprocals of income and asset cover for the lowest level of loan stock. (possibly including preference dividends, in which case divide by 1 - 0·30 for tax)

Equity Ratios

- Earnings per Share = $\frac{\text{Net profits after tax}}{\text{number of ordinary shares}}$

The basic EPS is as above, the diluted EPS takes rights issues, etc into account

- Price Earnings Ratio = $\frac{\text{Market price of an ordinary share}}{\text{Net earnings per share}}$

The EPS figure can be either historic or prospective. High PE ratios mean that the market believes the company to be low risk, have high earnings growth or it may be overvalued.

- Dividend Yield = $\frac{\text{Gross dividends per share}}{\text{Market price of ordinary shares}}$

Note that dividend yield uses gross dividends

- Dividend Cover = $\frac{\text{Earnings per share}}{\text{Dividends per share}}$

A high level of dividend cover indicates growth.

- Net Asset Value Per Share = $\frac{\text{Ordinary shareholders funds - intangible assets}}{\text{Number of ordinary shares}}$

What each shareholder would recieve if the company was immediately wound up. If the net asset value is greater than the share price the shares may be undervalued.

Gearing, Risk and Beta

Gearing

This is the ratio of debt finance to total finance. The level will be affected by

- Shareholder attitudes to risk verses profit.
- Shareholder attitudes to putting extra money in and seeing reduction in proportion owne
- The nature of the business and its assets.
- The effects of taxation.

The more a companies capital structure fits market perception, the higher it is rated. Note that since higher debt gives higher risk of default, a higher return must be paid and so raising money through debt is not cheaper than equities. However, tax advantages may make it worthwhile.

Risk

A systematic risk is one which affects the market as a whole.
A specific risk is one which affects a company, but not the whole market.

Beta

We can get government bonds with a nearly risk free return R. The difference between this and the return for a stock E_i is the equity risk premium of that stock
Some sectors move by a greater amount than the market average.
By comparing how the return of a stock changes with the market average we find the correlation - the beta of that stock

$$E_i = R + \beta_i (E_m - R)$$

The gearing affects the beta

$$\beta_G = \beta_U \times \left(1 + \frac{\text{debt}}{\text{equity + debt}} (1 - \text{tax rate})\right)$$

Project Evaluation (Holistic)

The choice of whether to do a project or not needs to be about more than just the revenue the project will bring in, but about the effect it will hav on the companies value as a whole. Attention needs to be paid to

Strategic Fit

Does the project build on areas of expertise, resources or customer base. If new skills must be learnt, are they useful in the future. Is the industry moving towards or away from such projects

Opportunity Cost

Is there something better that could be done with the money. Should we have a low paying project just to use spare money.

Perception

How does this change perception of competitors, shareholders, analysts and the general public

Financials

Does this change the debt rating, stock beta, dividend policy or earnings.

Project Evaluation (WACC)

The weighted average cost of capital is defined as

$$\frac{(\text{Risk free rate} + \beta_E \cdot \text{Equity risk premium}) \times \text{Equity} + \text{Cost of debt} \times (1 - \text{tax}) \times \text{Debt}}{\text{Total Capital}}$$

This is the rate we should use for projects with the same beta as the company.

If the beta is different and we need just equity finance we can use the new beta with the risk free rates of return and market equity risk premium.

If we need more than just equity finance, calculate an adjusted present value using equity rates and an ungeared project beta, then calculate the tax shield from interest payments at borrowing rates.

Project Evaluation (Numerical)

The following are the main ways, in order of complexity.

Payback Period (Discounted is preferred)

The time it takes for the accumulated cashflow to become neutral.

Nominal Returns

The ratio of cash generated to cash consumed over a chosen period.

Annual Capital Charge

In projects with an initial capital outlay, express this as a capital charge over the succeeding years. This provides smoother numbers to work with.

Accumulated Value

Calculate how much money will have been made (with interest) at the end of the project. This only works if there is a definite time horizon on the projec

Net Present Value

Discount all cashflows back to today to give the present value of the project. Choose an interest rate higher than the rate of borrowing to reflect risk or to ensure a certain level of profit.

Internal Rate of Return

Find the lowest positive interest rate at which the net present value is zero. This has problems in that it may not have a solution, or have multiple ones, and depending on sensitivity to interest rate changes, it may have no bearing on what the projects return would actually be.

Probability Trees

Often projects consist of a number of decisions spread over time. Probability trees allow us to investigate such projects, and keep our expectations up to date by letting us refine the tree when expectations change. They have the advantage that it is easy to visualise what is taking place.

Sensativity analysis

Take the NPV calculation and change each key assumption in turn to the most optimistic and most pessimistic results. This way we can identify which variables have most outcome on the project to investigate them further

Scenario Testing

Consider sets of plausible input to allow consideration of the interrelationships between input values.

Monte Carlo Simulation

Create a model of the project, specify probabilities for distributions of key variables, simulate the cashflows many times, and record the result to assess probability distributions. This method is highly effective, but depends critically on the model being appropriately designed and appropriately distributed inpu