ADVANCED FINANCIAL MANAGEMENT (AFM)

Ms Annie Tan

ASSOCIATION OF CHARTERED CERTIFIED ACCOUNTANTS

Genesis Origo

annie.tan lc @gmail·com ,,

Unit # 1

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The principal role of the senior financial executive when setting financial goals is the maximisation of shareholders' wealth (equivalent to the maximisation of the market value of the company's ordinary shares).

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1. Dividends received
2. Market value of shares (capital gain)

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Through company's value and its shares.

1. Statement of financial position valuation - assets will be valued on a going concern basis (book value basis)

2. Break-up basis - Used when the business is being wound up (threat of liquidation)

3. Market value – Price at which buyers and sellers will trade shares in a company (most relevant to the company's financial objective)

ACCA AFM
Advanced Financial Management

Value of a business increased when share price goes up!

- Potential takeover bid

- News of winning a major contract

- Better than expected profit forecasts and published results

- Change in senior staff, such as a new CEO

- Share buyback by the company (reduces supply of shares which should increase the price)

- Risk and uncertainty – The objective fails to recognise the risk and uncertainty associated with certain projects. Shareholders tend to be very interested in the level of risk and maximising profit may be achieved by raising the risk to unacceptable levels.

- Manipulation of profits – Unlike cash, profits can be easily manipulated. For example, by changing depreciation policy or provision for doubtful debts percentage. It is therefore not difficult to be maximising profits when in reality the company is no better off.

- Dividend policy – Retained profits can be increased by reducing the dividend payout ratio and this is not necessarily in the best interest of the shareholders who might prefer a certain monetary return on their investment.

- Future profits – Which profits should management be maximising? Shareholders may not want current profits to be maximised at the expense of future profits.

$$EPS = \frac{\text{Net Profit/loss attributable to ordinary shareholders}}{\text{Weighted average number of ordinary shares}}$$

Use of EPS:

- Comparing results over a number of years ie. EPS growth year

- To demonstrate sustain earnings for dividend payouts and reinvestment in the business.

However

- EPS is based on past data whereas investors should be more concerned with future earnings.

- Very easy to manipulate by changes in accounting policies and by mergers & acquisitions.

- In reality, EPS is probably disproportionate to its true worth

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Objective of financing decision – Minimise weighted average cost of capital

Long term decisions – Determine the source, costs and effect on risk of the possible of long-term finance

Short term decisions – Working capital management by achieved a balance between profitability and liquidity

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Short term sources

Overdraft – The deficit of current account is financed by an overdraft. It offer a degree of flexibility and interest is only charged based on overdrawn amounts.

Short term loans – Fixed amount for a specific period of time and capital received immediately. Repaid at specific time/instalments at predetermined interest rates .

Trade credit – Take advantage of credit period granted by supplier particularly useful during high inflation. However, dalays in payment will lead to adverse effect on credit ratings.

Leasing – It is an alternative to purchasing an asset . It could be either finance lease or operating lease.

Long term sources

Debt Finance – Choice of debt finance depends on:

- Size of the business
- Duration of the loan
- Fixed or floating interest
- Security offered

Bonds – debt capital raised by a company and fixed interest is paid.

- Redeemable/irredeemable
- Floating rate, zero coupon and convertible
- Nominal value = debt owed by the company
- Interest is paid at a stated 'coupon' rate on nominal value
- Main concern : ability to pay off debt when the redemption date arrives

Equity – sale of ordinary shares to investors via a new issue or a rights issue

- Holders of equity shares bear the ultimate risk as they are at the bottom of the creditor hierarchy in the event of

liquidation.
- Due to high risk, expect the highest return of long-term finance providers
- Cost of equity > cost of debt

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Level of gearing depends on:

(1) Stage in company's life cycle – High level of gearing is discourage if a company just starting up or is in its early growth phase.

(2) Stability – New companies and companies in volative businesses, tend to have fluctuating earnings, as do companies in volatile businesses. Unstable earnings are not conductive to high gearing ratios.

(3) Operational gearing (contribution/PBIT) – High levels of fixed costs mean that contribution will be high relative to profits after fixed costs – that is, high operational gearing. This cost structure means volatile cash flows, therefore high levels of gearing are not recommended.

(4) Security/collateral for the debt

      & – Systematic risk borne by the equity stakeholders

- The company as a whole forced into liquidation if unable to repay liabilities when fall due

- Lenders request higher interest yield to compensate for higher financial risk and gearing

- The ordinary shareholders distributable profits affected with higher interest-bearing debts and higher expected return to compensate higher financial risk.

- Other short term financial risks:
  - Credit risk – payment default by customer
  - Liquidity risk – Unable to finance the credit
  - Cash management risks – Unpredictable cash flows
- Longer term risks:
  - Currency risk
  - Interest rate risk
  - Changes in the macro-economic environment

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(1) Traditional view – There is an optimal mix at which the average cost of capital, weighted according to the different forms of capital employed, is minimised.

(2) Modigliani and Miller Theory – The firm's overall WACC is not influenced by the changes in its capital structure. Their argument is that the issue of debt causes the cost of equity to rise in such a way that the benefits of debt on returns are exactly offset. Investors themselves adjust their level of personal gearing and thus the level of corporate gearing becomes irrelevant.

(3) Pecking Order Theory – The internal finance should be first utilised , follow by debt finance and equity finance at last.

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- Control
- Costs
- Present sources of finance
- Feasibility of capital structure
- Availability and popularity of finance
- Future trends
- Restriction in loan agreements
- Maturity dates

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✔ Advantages of debt finance:

- Cheaper

- Tax relief

- More attractive to investor

- Debt holder rank above shareholder (event of liquidation)

- Issue costs lower than equity finance

- No dilution of EPS and dividend

✘ Disadvantages of debt finance:

- Interest has to be paid on debt even loss making

- May locked into unfavourable interest rates of interest

- Availability of finance during redemption or repayment

- Increases financial risk : Investors might expecting higher return

- Restrictions imposed on company's ability to borrow

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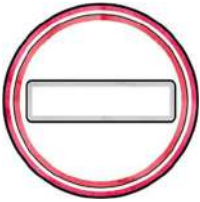
CIMA Official Terminology

Capital rationing is a restriction on an organisation's ability to invest capital funds, caused by an internal budget ceiling being imposed on such expenditure by management (soft capital rationing), or by external limitations being applied to the company, as when additional borrowed funds cannot be obtained (hard capital rationing).

Soft Capital Rationing	Hard Capital Rationing
Management reluctant to issue additional share capital	Raising money through the stock market may not be possible if share prices are depressed.

Soft Capital Rationing:

Management reluctant to issue additional share capital

- may lead to outsiders gaining control of the business
- will lead to a dilution of earnings per share

May not want to raise additional debt capital – committed to large fixed interest payments.

Management limit investment to a level that can be financed solely from retained earnings.

Capital expenditure budgets may restrict spending.

Hard Capital Rationing:

Raising money through the stock market may not be possible if share prices are depressed.

There may be restrictions on bank lending due to government control.

Lending institutions may consider an organisation to be too risky to be granted further loan facilities.

The costs associated with making small issues of capital may be too great.

Capital rationing decisions:

(1) Divisible projects → projects are those which can be undertaken completely or in fractions
(use profitability index = NPV of the project / initial cash outflows)

(2) Non-divisible projects → projects must be undertaken completely or not at all!
(trial and error for possible combination, select the combination with the highest NPV)
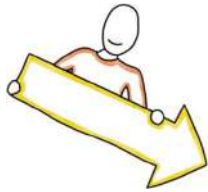
An option is a <u>contract</u> that gives one party the option to enter into a transaction either at a specific time in the future or within a specific future period at a price that is agreed when the contract is issued.

The <u>exercise or strike price</u> is the price at which the future transaction will take place.

<u>Premium</u> is the price paid by the option buyer to the seller, or writer, for the right to buy or sell the underlying.

American style options can be exercised any time before expiry and most traded options are American style options, whereas over-the-counter options tend to be European style options.

Buyer of call options acquires the rights, but not an obligation to buy the underlying at a fixed price.

Buyer of a put option acquires the rights, but not an obligation to sell the underlying at a fixed price.

Exercise when price of the underlying asset > exercise price at maturity

Option value = Exercise price – Underlying value
Otherwise, = 0

Profit/(loss) = option value – premium cost
Unlimited profits (depend on the underlying value at maturity)

Exercise when price of underlying < exercise price at maturity.

Option value = Exercise price - underlying value
Otherwise, = 0

Profit/(Loss) = Option value – Premium cost
Maximum profit when underlying value is zero.

Long call exercised – loss making
Maximum gain when long call never exercise

Option value (negative) = value of underlying – exercise price, Otherwise = 0

Profit/(loss) = Premium received – option value
Unlimited losses (depend on underlying value at maturity)

Long put exercised – loss making

Maximum profit is the premium received (when long put never exercise)

Maximum loss when underlying value is zero

Option value (negative) = Underlying value – exercise price

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(1) Call option = Underlying stock's current price – call strike price

(2) Put option = Put strike price – Underlying stock's current price

Outcome:

(I) Positive → option is in the money (ITM)

(ii) zero → option is at the money (ATM)

(iii) Negative → option is out of the money (OTM)

- The difference between the market price of an option and its intrinsic value is the time value of the option. Buyers of ATM or OTM options are simply buying time value, which decreases as an option approaches expiration.

- The more time an option has until expiration, the greater the option's chance of ending up in themoney and the larger its time value. On the expiration day the time value of an option is zero and all an option is worth is its intrinsic value. It's either in-the-money, or it isn't.

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&   &   & $c = P_a\,N\,(d_1) - P_e\,N\,(d_2)e^{-rt}$

&   &   & $p = c - P_a + P_e\,e^{-rt}$

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Pa   Current price of the underlying / Present value
Pe   Exercise price
r   Risk free interest rate
s   Standard deviation
t   Time to expiration/maturity

$$d_1 = \frac{\ln(P_a / P_e) + (r + 0.5s^2)t}{s\sqrt{t}}$$

$$d_2 = d_1 - s\sqrt{t}$$

Illustration:

Consider the situation where the stock price 6 months from the expiration of an option is $42, the exercise price of the option is $40, the risk-free interest rate is 10% p.a. and the volatility is 20% p.a. This means Pa = 42, Pe = 40, r = 0.1s = 0.2, t = 0.5.

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Real options are alternatives or choices that may be available with a business investment opportunity. An option exists when the decision-maker has the right, but not the obligation, to take a particular action. They add value as they provide opportunities to take advantage of an uncertain situation as the uncertainty resolves itself over time.

Real options are known as such as they usually relate to tangible assets. A real option embodies flexibility in the development of a project. It gives the company the right but not the obligation to take some course of action that may be desirable if there is an unfortunate turn of events or a new opportunity presents itself. A real option represents either a form of insurance or a means to take advantage of a favourable situation.

Real options are 'actual options' – that is, actual choices that a business can make in relation to investment opportunities.

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Although the cash flows are discounted at an appropriate cost of capital, NPV does not explicitly deal with uncertainty when valuing the project. A risk-adjusted discount rate reduces the present value of the cash flows (the higher the discount rate, the lower the present value) rather than giving the decision-maker an indication of the range of cash flows that a project may deliver. The use of a single discount rate means that risk is defined in one measure. This does not allow for the many sources of uncertainty that may surround the project and its cash flows.

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NPV fails to consider the extent of management's flexibility to respond to uncertainties surrounding the project. Such flexibility can be an extremely valuable part of the project and by failing to account for it, NPV may significantly underestimate the project's value.

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The BSOP model makes several assumptions such as perfect markets, constant interest rates and lognormal distribution of asset prices.

It also assumes that volatility can be assessed and stays constant throughout the life of the project, and that the underlying asset can be traded. Neither of these assumptions would necessarily apply to real options.

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It measures the sensitivity of the price of a bond to a change in interest rates

Modified duration = Macaulay Duration / (1 + GRY)

Duration can be used to assess the change in the value of a bond when interest rates change using the following formula:
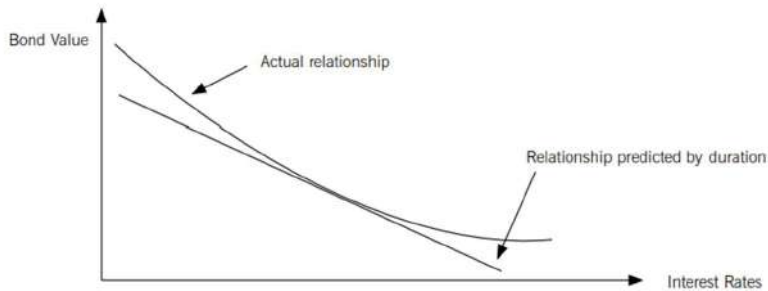
$\Delta P = [-D \times \Delta i \times P] / [1 + i]$,

> where
>
> P is the price of the bond,
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> D is the duration and
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> i is the redemption yield

However, duration is only useful in assessing small changes in interest rates because of convexity. As interest rates increase the price of a bond decreases and vice versa, but this decrease is not proportional for coupon paying bonds, the relationship is non-linear. In fact the relationship between the changes in bond value to changes in interest rates is in the shape of a convex curve to origin, see below.

Duration, on the other hand, assumes that the relationship between changes in interest rates and the resultant bond is linear. Therefore duration will predict a lower price than the actual price and for large changes in interest rates this difference can be significant.

Duration can only be applied to measure the approximate change in a bond price due to interest changes, only if changes in interest rates do not lead to a change in the shape of the yield curve. This is because it is an average measure based on the gross redemption yield (yield to maturity). However, if the shape of the yield curve changes, duration can no longer be used to assess the change in bond value due to interest rate changes.

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The risk undertaken by the lender that the borrower will default either on interest payments or on the repayment of principal on the due date, or on both.

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- Credit risk arises from the inability of a party to fulfil its obligation under the terms of a contract.
- Creditors to companies such as corporate bondholders and banks are also exposed to credit risk.
- The credit risk of an individual loan or bond is determined by the following two factors

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Probability that the borrower or counterparty will default on its contractual obligations to repay its debt.

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The fraction of the face value of an obligation that can be recovered once the borrower has default.

Loss given default (LGD) = Amount of money owed by the borrower – the amount of money recovered

For example, a bond has a face value of $100 and the recovery rate is 80 percent.

Loss given default = $100 – $80 = $20

The expected loss (EL) from credit risk : the amount of money the lender should expect to lose from the investment in a bond or loan with credit risk.

The expected loss (EL) is the product of the loss given default (LGD) and the probability of default (PD).

EL = PD × LGD

Unit # 7

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The yield curve can be used to estimate the value of a bond & estimate an issue price.

This can be done by splitting up the payments associated with one bond into separate bonds and discounting by the relevant rate according to the yield curve.

Yield curve rates are published by the financial press and by central banks.

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The actual amount of cash that a company has left from its operations that could be used to pursue opportunities that enhance shareholder value.

The cash flow derived from the operations of a company after subtracting working capital, investment and taxes and represents the funds available for distribution to the capital contributors, ie shareholders and debt holders.

| Free cash flows	$
EBIT/PBIT	XX
Less: Tax	(X)
EBIT after tax	XX
Add: Non cash expenditures	X
Add: Working capital recovery	X
Less: Capital expenditure	(X)
Less: Additional investment	X
Free cash flows	X
Less: Interest	(X)
Free cash flow to equity	X

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Business value = Present value of future free cash flows in perpetuity

Discount rate:

[FCF $(1+g)$ / kwacc- g] – debt = value to equity

FCFE $(1+g)$ / ke – g = value to equity

Unit # 8
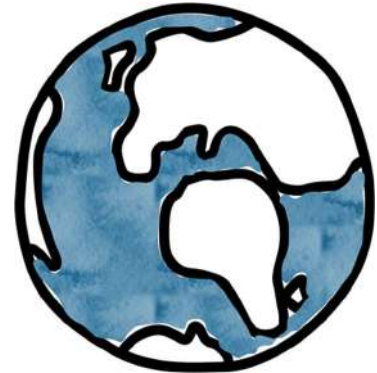
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A project in a foreign country is assessed, company must consider local taxes, double taxation agreements, and political risk that affect the present value of the project.

The main consideration of course in an international project is the exchange rate risk, that is the

risk that arises from the fact that the cash flows are denominated in a foreign currency. An appraisal of an international project requires estimates of the exchange rate.

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Purchasing power parity theory states that the exchange rate between two currencies is the same in equilibrium when the purchasing power of currency is the same in each country.

Purchasing power parity theory predicts that the exchange value of foreign currency depends on the relative purchasing power of each currency in its own country and that spot exchange rates will vary over time according to relative price changes.

$$S_1 = S_0 \times \frac{(1+h_c)}{(1+h_b)}$$

Where S_1 = expected spot rate
S_0 = current spot rate
h_c = expected inflation rate in country c
h_b = expected inflation rate in country b

The spot exchange rate between UK sterling and the Danish kroner is £1 = 8.00 kroners. Assuming that there is now purchasing parity, an amount of a commodity costing £110 in the UK will cost 880 kroners in Denmark. Over the next year, price inflation in Denmark is expected to be 5% while inflation in the UK is expected to be 8%. What is the 'expected spot exchange rate' at the end of the year?

Under interest rate parity the difference between spot and forward rates reflects differences in interest rates.

Interest rate parity predicts foreign exchange rates based on the hypothesis that the difference between two countries' interest rates should offset the difference between the spot rates and the forward exchange rates over the same period.

A US company is expecting to receive Zambian kwacha in one year's time. The spot rate is US$1 =

ZMK4,819. The company could borrow in kwacha at 7% or in dollars at 9%. There is no forward rate for one year's time.

Estimate the forward rate in one year's time.

Inaccuracy as future events can result in large unexpected currency rate swings that were not predicted by interest rate parity.

Less accurate than purchasing power parity for predicting future exchange rates.

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The International Fisher effect states that currencies with high interest rates are expected to depreciate relative to currencies with low interest rates.

Under free movement of capital internationally, this idea suggests that the real rate of return in different countries will equalise as a result of adjustments to spot exchange rates.

The International Fisher effect can be expressed as:

$$\frac{1+i_c}{1+i_b} = \frac{1+h_c}{1+h_b}$$

Where i_a is the nominal interest rate in country c
           i_b is the nominal interest rate in country b
           h_a is the inflation rate in country c
           h_b is the inflation rate in country b

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The nominal interest rate in the US is 5% and inflation is currently 3%. If inflation in the UK is currently 4.5%

what is its nominal interest rate? Would the dollar be expected to appreciate or depreciate against sterling?

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CIV calculates an 'excess return' on tangible assets.

A step-by-step approach would be as follows.

Step 1   Calculate average pre-tax earnings over a time period

Step 2   Calculate average year end tangible assets over the time period using statement of financial position

Step 3   Divide earnings by average assets to get the return on assets.

Step 4   Find the industry's return on assets OR Capital employed

Step 5   Multiply the industry's return on asset percentage by the entity's average tangible assets OR ROCE %

Subtract this from the entity's pre-tax earnings to calculate the excess return.

Step 6   Calculate the average tax rate over the time period and multiply this by the excess return.

Subtract this from the excess return to give the after-tax premium attributable to intangible assets

Step 7   Calculate the NPV of the premium by dividing it by the entity's cost of capital.

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✗ It uses average industry ROA as a basis for computing excess returns, which may be distorted by extreme values.

✗ The choice of discount rate to apply to the excess returns to value the intangible asset needs to be made with care. To ensure comparability between companies and industries, some sort of average cost of capital should perhaps be applied. This again has the potential problems of distortion.

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(a) Relief from royalties method
     This method involves trying to determine:
     •   The value obtainable from licensing out the right to exploit the intangible asset to a third party, or
     •   The royalties that the owner of the intangible asset is relieved from paying through being the owner rather than the licensee

(b) Premium profits method
     The premium profits method is often used for brands. It bases the valuation on capitalisation of the extra profits generated by the brand or other intangible asset in excess of profits made by businesses lacking the intangible asset or brand.

The premium profits specifically attributable to the brand or other intangible asset may be estimated (for example) by comparing the price of branded products and unbranded products. The estimated premium profits can then be capitalised by discounting at a risk-adjusted market rate.

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With the capitalised earnings method, the maintainable earnings accruing to the intangible asset are estimated. An earnings multiple is then applied to the earnings, taking account of expected risks and rewards, including the prospects for future earnings growth and the risks involved. This method of valuation is often used to value publishing titles.

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This method looks at actual market transactions in similar intangible assets. A multiple of revenue or earnings from the intangible asset might then be derived from a similar market transaction. A problem with this method is that many intangible assets are unique and it may therefore be difficult to identify 'similar' market transactions, although this might be done by examining acquisitions and disposals of businesses that include similar intangible assets.

The method might be used alongside other valuation methods, to provide a comparison.

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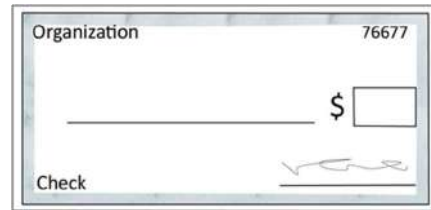
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A cash offer can be financed from:

- w & & & - This is a common way when the firm to be acquired is small compared to the acquiring firm, but not very common if the target firm is large relative to the acquiring firm. A company occasionally may divest of some of its own assets to accumulate cash prior to bidding for another company.

- & & & & & – That is the company may raise money by issuing bonds. This is not an approach that is normally taken, because the act of issuing bonds will alert the markets to the intentions of the company to bid for another company and it may lead investors to buy the shares of potential targets, raising their prices.

- j & & & & & – This can be done as a short-term funding strategy, until the bid is accepted and then the company is free to make a bond issue.

- & – This may be the only route for companies that do not have access to the bond markets in order to issue bonds.

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j &P&	j &G&
Identify the free cash flows of the target company (before interest)	Identify free cash flows to equity (after interest)
Discount FCF at WACC	Discount FCFE at Ke
Total PV in perpetuity – debt = value to equity	Total PV in perpetuity = value to equity

Chunky Trot Inc is planning on making a bid to take over Turkey Lurkey Inc which is in the same industry. Both companies have similar gearing levels of 18% (where gearing is debt as a % of total finance).

Chunky Trot has estimated that the takeover will increase its annual cash flows over the next few years by the following amounts.

Year	After-tax (but before interest) cash flows
	$m
20X1	14.00
20X2	18.50
20X3	20.75
20X4 onwards	30.25

Turkey Lurkey Inc has 6.5% irredeemable debentures of $37.5 million trading at par. The risk-free rate is 6.5% and the market rate is 12%. Chunky Trot's equity beta is 2.450 and the corporation tax rate is 28%.

Required

If Chunky Trot was prepared to bid $100 million for the entire share capital of Turkey Lurkey, would the acquisition increase shareholder wealth? Use both approaches given above to illustrate your answers.

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Example: dividend growth (1)

Hibby Inc has declared a dividend of 35 cents per share. Dividends are expected to grow at 5% in the future in line with previous growth rates. The current cost of equity is 8%.

What is the estimated value of one share in Hibby Inc?

Example: dividend growth (2)

Janster Inc has declared a dividend of 20 cents per share and has a cost of equity of 15%.

What is the estimated value of one share in Janster Inc in each of the following situations?

(a) No growth in dividends

(b) A constant growth in dividends of 6% per annum

(c) A constant dividend for four years and then 7% per annum in perpetuity thereafter

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It affects the acquiring company's exposure to financial risk only – it does not affect exposure to business risk.

An acquisition is valued by discounting the Free Cash Flows to the firm by the ungeared cost of equity and then adding the present value of the tax shield. The net present value is given by

APV = Value of acquired company if all-equity financed + Present Value of Debt Tax Shields – Initial investment

If the APV is positive then the acquisition should be undertaken

The management of XERON Inc is considering the acquisition of NERON Inc. an unquoted company. The owners of NERON want $500 million for the business. The analysis of the prospects of NERON by XERON is reflected in the following financial statements.

STATEMENT OF PROFIT OR LOSS

	Current Year 20X7	20X8	20X9	20Y0	20Y1	20Y2	20Y3
Sales	620.0	682.0	750.2	852.22	907.74	998.52	998.52
Less: Cost of sales	410.0	441.0	475.1	512.61	553.87	599.25	599.26
Gross profit	210.0	241.0	275.1	312.61	353.87	299.26	399.26
Operating expenses	133.0	144.3	156.53	169.78	184.16	199.78	199.78
EBIT	77.0	96.7	118.57	142.83	169.71	199.48	199.48
Less: Interest	-	32	26.88	20.19	11.73	1.27	-
Earnings before tax	77.0	64.7	91.69	122.64	157.98	198.21	199.48
Taxes	21.56	18.12	25.67	34.34	44.23	55.5	55.85
Net Income	55.44	46.58	66.02	88.30	113.75	142.71	143.63

STATEMENT OF FINANCIAL POSITION

	Current Year 20X7	20X8	20X9	20Y0	20Y1	20Y2	20Y3
Current assets	100.00	100.00	100.00	100.00	100.00	242.90	404.55
Non-current assets	400.00	378.00	354.00	328.00	300.00	270.00	238.00
Total assets	500.00	478.00	454.00	428.00	400.00	512.90	642.55
Debt	400.00	335.95	252.35	146.63	15.94	-	-
Equity	100.00	142.05	201.65	281.37	384.06	512.90	642.55
Total assets	500.00	478.00	454.00	428.00	400.00	512.90	642.55

Unit # 12

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Interest rate risk – The risk to the profitability or value of a company resulting from changes in interest rates.

Factors influencing interest rate risk include

- Fixed rate versus floating rate debt
- The term of the loan

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Corporate treasurers will be responsible for managing the company's debt portfolio, that is in deciding how a company should obtain its short-term funds so as to:

- Be able to repay debts as they mature
- Minimise any inherent risks, notably invested foreign exchange risk, in the debts the company owes and is owed.

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Expectations of interest rate movements will determine whether a company chooses to borrow at a fixed or floating rate. The term structure of interest rates – the rates available on loans of different length – should help businesses determine the market's view on how interest rates are likely to move in the future.

Fixed rate finance may be more expensive:

However the business runs the risk of adverse upward rate movements if it chooses floating rate finance.

Other factors include:

- Finance term (the longer the term the more difficult interest rates are to predict)

- The differences between fixed and floating rates, plus arrangement costs or new finance

- The finance risk tolerance of the directors

- Existing debt mix (greater finance diversification may be desirable to hedge all possibilities)

- Current pressures on liquidity – if the business is stretched in the short-term, it may prefer to take the lower rate available on floating rate debt. In doing so, it is taking the risk that rates may rise and borrowing eventually become more expensive. However the directors are calculating that if this happens, the company will have accumulated sufficient cash to be able to bear the higher rates.

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A company can face higher costs if it borrows in a currency for which exchange rates move adversely against the company's domestic currency. The treasurer should seek to match the currency of the loan with the currency of the underlying operations/assets that generate revenue to pay interest/repay the loans.

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A company can be exposed by having to repay a loan earlier than it can afford to, resulting in am need to re-borrow, perhaps at a higher rate of interest.

&S& & & & & &

A company might prefer to pay for borrowings only when it needs the money as with an overdraft facility: the bank will charge a commitment fee for such a facility. Alternatively, a term loan might be preferred, but this will cost interest even if it is not needed in full for the whole term.

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A company may plan to take out borrowing at some time in the future, but face the possibility that interest rates may rise before the term of borrowing commences. This problem can be addressed by using financial instruments to fix or cap the rate of interest. This is described later in this chapter.
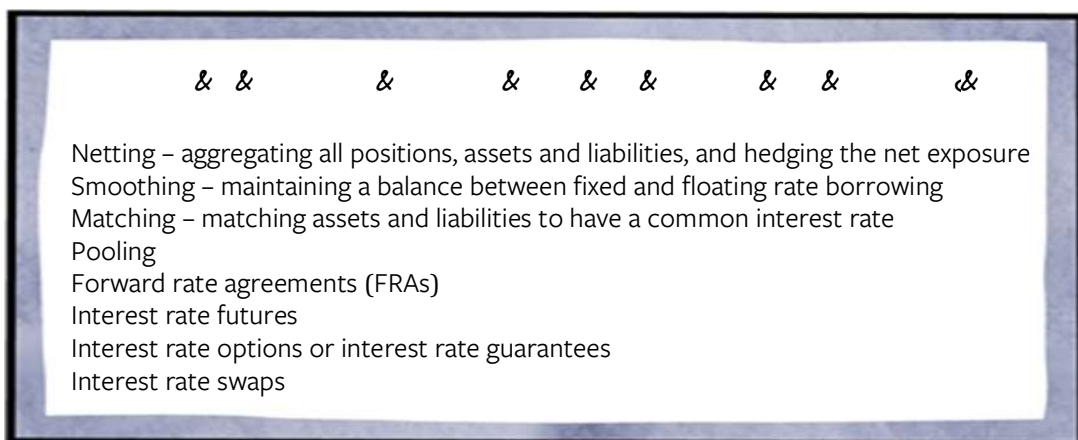
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When the magnitude of the risk is immaterial in comparison with the company's overall cash flows or appetite for risks, → do nothing.

If risk management costs are excessive → do nothing!

If hedging is likely to reduce variability of earnings, this may have tax advantages if the company faces a higher rate of tax for higher earnings levels.

The directors may also be unwilling to undertake hedging because of the need to monitor the arrangements, and the requirements to fulfil the disclosure requirements of IASs 32 and 39 and IFRSs 7 and 9.

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Netting – aggregating all positions, assets and liabilities, and hedging the net exposure
Smoothing – maintaining a balance between fixed and floating rate borrowing
Matching – matching assets and liabilities to have a common interest rate
Pooling
Forward rate agreements (FRAs)
Interest rate futures
Interest rate options or interest rate guarantees
Interest rate swaps

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Pooling means asking the bank to pool the amounts of all its subsidiaries when considering interest levels and overdraft limits. It should reduce the interest payable, stop overdraft limits being breached and allow greater control by the treasury department. It also gives the company the potential to take advantage of better rates of interest on larger cash deposits.

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Forward rate agreements hedge risk by fixing the interest rate on future borrowing.

A forward rate agreement is an agreement, typically between a company and a bank, about the interest rate on future borrowing or bank deposits.

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A forward rate agreement (FRA) does not involve the actual transfer of capital from one party to another.

A FRA is an agreement to borrow/lend a notional amount for up to 12 months at an agreed rate of interest (the FRA rate). The 'notional' sum is the amount on which the interest payment is calculated. Only the interest on the notional amount between the rate dealt (that is the rate when the FRA is traded) and the rate prevailing at the time of settlement (the reference rate) actually changes hands. If there is a rise in interest rates between the time that the FRA is traded and the date that the FRA comes into effect, the borrower is protected from paying the higher interest rate. If interest rates fall during that time, the borrower must pay the difference between the traded rate and the actual rate on the notional sum.

Trade date – The date on which the contract begins (or when the contract is 'dealt')

Spot date – The date on which the interest rate of the FRA is determined

Fixing date – The date on which the reference rate (which will be compared with the FRA rate on settlement) is determined. The reference rate is the LIBOR on the fixing date. The fixing date is usually 2 business days before the settlement date.

Settlement date – The date on which the notional loan is said to begin. This date is used for the calculation of interest on the notional sum. For example, if you entered into a 3 6 FRA, this would be 3 months after the spot date.

Maturity date – The date on which the notional loan expires. For example, in a 3 6 FRA, this would be 3 months after the settlement date.

✓ Protection provided

An FRA would protect the borrower from adverse interest rate movements above the rate negotiated.

✓ Flexibility

FRAs are flexible; they can in theory be arranged for any amounts and any duration, although they

are normally for amounts of over $1 million.

✓ Cost

Forward rate agreements may well be free and will in any case cost little.

✗ Rate available

The rate the bank will set for the forward rate agreement will reflect expectations of future interest rate movements. If interest rates are expected to rise, the bank may set a higher rate than the rate currently available.

✗ Falling interest rate

The borrower will not be able to take advantage if interest rates fall unexpectedly.

✗ Term of FRA