BUSINESS VALUATION

Takeover:

A **takeover** is the acquisition by a company of a controlling interest in the voting share capital of another company, usually achieved by the purchase of a majority of the voting shares.

Market capitalization:

Market capitalisation is the market value of a company's shares. This is the share price multiplied by the number of issued shares.

Business valuation methods:

There are three broad approaches to share valuation:

1. Asset valuation bases
2. Income-based valuation bases
3. Cash flow based valuation models

Asset based valuation:

- Using this method of valuation, the value of an equity share is equal to the net tangible assets divided by the number of shares.
- Net tangible assets are the value in the statement of financial position of the tangible non-current assets (net of depreciation) plus current assets, minus all liabilities.
- Intangible assets (including goodwill) should be excluded, unless they have a market value (for example patents and copyrights, which could be sold).

Choice of valuation basis:

The figure attached to an individual asset may vary considerably depending on whether it is valued on a **going concern** or a **break-up** basis.

- **Historical cost basis (net book value)** – unlikely to give a realistic value, as it is dependent on the business's depreciation and amortization policy.
- **Realizable basis** – if the assets are to be sold or the business as a whole broken up. This won't be relevant if a minority (non-controlling) shareholder is selling their stake, as the assets will continue in the business's use.
- **Replacement basis** – if the assets are to be used on an ongoing basis.
- ✓ A **merger** is essentially a business combination of two or more companies, of which none obtains control over any other.

Income-based valuation bases:

1. P/E ratio (earnings) method of valuation

- The P/E ratio relates earnings per share to a share's value.
- This method relies on finding listed companies in similar businesses to the company being valued (the target company), and then looking at the relationship they show between share price and earnings. Using that relationship as a model, the share price of the target company can be estimated.
- The P/E ratio produces an **earnings-based** valuation of shares by deciding a suitable P/E ratio and multiplying this by the EPS for the shares which are being valued.

$$\text{P/E ratio} = \frac{Market\ value}{EPS}$$

Market value per share = EPS X P/E ratio

Problems with using P/E ratios:

- ➢ Finding a quoted company with a **similar range of activities** may be difficult. Quoted companies are often **diversified**.
- ➢ The quoted company may have a **different capital structure** to the unquoted company.
- ➢ If a P/E ratio trend is used, then **historical data** will be used to value how the unquoted company will do in the future.

Use of forecast earnings:

When one company is thinking about taking over another, it should look at the target company's **forecast earnings**, not just its historical results.

Forecasts of **earnings growth** should only be used if:

- ○ There are good reasons to believe that earnings growth will be achieved.
- ○ A reasonable estimate of growth can be made.

Earnings yield valuation method:

Another income-based valuation model is the earnings yield method.

Earnings yield (EY) = $\dfrac{EPS}{Market\ price\ per\ share}$ x 100%

Market Value = $\dfrac{Earnings}{Earning\ Yield}$

Growth can also be incorporated into this method:

Market value = $\dfrac{Earnings \; x \; (1+g)}{(EY-g)}$

Cash flow based valuation models:

Following are the cash flow based valuation models which are as follows:

1. Dividend valuation model
2. Valuation on a **discounted cash flow basis.**

The dividend valuation model:

The value of the company/share is the present value of the expected future dividends discounted at the cost of equity.

$$Po = \dfrac{Do \; (1+g)}{Ke-g}$$ **FORMULA GIVEN**

Total MV = Share price x Total number of shares.

Advantages:

➢ Considers the time value of money and has an acceptable theoretical basis.
➢ Particularly useful when valuing a minority stake of a business

Disadvantages:

➢ Difficulty estimating an appropriate growth rate.
➢ The model is sensitive to key variables.
➢ The growth rate is unlikely to be constant in practice.

Discounted cash flow basis of valuation:

A DCF method of share valuation may be appropriate when one company intends to buy the assets of another company and to make further investments in order to improve cash flows in the future.

The value of the business is:

PV of future cash flows

A discount rate reflecting the systematic risk of the flows should be used.

The steps in this method of valuation are:

1. Identify relevant 'free' cash flows
   - operating cash flows
   - revenue from sale of assets
   - tax payable
   - tax relief
   - synergies from merger (if any)
2. Select a suitable time horizon
3. Identify a suitable discount rate
4. Calculate the present value over the time horizon.

Advantages:

- ✓ The best method on a theoretical basis.

May value a part of the company.

Disadvantages:

- ✓ It relies on estimates of both cash flows and discount rates – may be unavailable.
- ✓ Difficulty in choosing a time horizon.
- ✓ Difficulty in valuing a company's worth beyond this period.
- ✓ Assumes that the discount rate and tax rates are constant through the period.

VALUATION OF DEBT:

When valuing debt we assume that

Market price = The discounted cash flows of the debt

Note: The debt is normally valued gross of debt because we do not know the tax position of each investor.

Irredeemable debt:

The company does not intend to repay the principal but to pay interest forever, the interest is paid in perpetuity.

$$MV = \frac{I}{KD}$$ **(Without Tax)**

Where:

I = annual interest starting in one year's time
MV = market price of the debenture now (year 0)
Kd = company's cost of debt

If instead of r you are given the company's cost of debt the formula becomes:

$$MV = \frac{I(1-T)}{KD}$$ **(With Tax)**

Redeemable debt:

The market value is the present value of the future cash flows, these normally include:
 1. Interest payments for the years in issue
 2. Redemption value.

Value of debt = (Interest earnings ⮿ annuity factor) + (Redemption value ⮿ Discounted cash flow factor)

Convertible debt:

The value of a convertible is the higher of its value as debt and its converted value. This is known as the formula value.

The current **market value** of a convertible bond where conversion is expected is the sum of the present

Preference shares:

Similar to irredeemable debt, the income stream is the fixed percentage dividend received in perpetuity.

The formula is therefore: $P0 = \dfrac{D}{Kp}$

Examiner's Article on Business Valuation: "Business Valuation"

Link: http://www.accaglobal.com/content/dam/acca/global/PDF-students/2012s/sa_feb12_f9_valuationsv2.pdf

EFFICIENT MARKET HYPOTHESIS (EMH):

A market is efficient if:

- The prices of securities traded in that market reflect all the relevant information accurately and rapidly, and are available to both buyers and sellers.
- No individual dominates the market.
- Transaction costs of buying and selling are not so high as to discourage trading significantly.
- Market efficiency from the perspective of the EMH relates to the efficiency of information, the better the information received by investors, the better and more informed the decisions they make will be.

Forms of efficiency:

1. Weak form

Weak form hypothesis states that current share prices reflect all relevant information about the past price movements and their implications. If this is true, then it should be impossible to predict future share price movements from historic information or pattern.

Share prices only changes when new information about a company and its profits has become available. Since new information arrives unexpectedly, changes in share prices should occur in a random fashion, hence weak form can be referred to as random walk hypothesis.

2. Semi- strong form

Semi-strong form hypothesis state that current share prices reflects both

- (i)   all relevant information about past price movement and their implications; and
- (ii)   publicly available information about the company.

Any new publicly accessible information whether comments in the financial press, annual reports or brokers investment advisory services, should be accurately and immediately reflected in current share prices, so investment strategies based on such public information should not enable the investor to earn abnormal profit because these will have already been discounted by the market.

3. Strong form

The strong form hypothesis states that current share prices reflect all relevant information available from

- past price changes
- public knowledge; and
- Insider knowledge available to specialists or experts such as investment managers.

Implications of EMH for financial managers:

If capital markets are efficient, the main implications for financial managers are:

1. The timing of issues of debt or equity is not critical, as the prices quoted in the market are 'fair'. That is price will always reflect the true worth of the company, no over or under valuation at any point.
2. An entity cannot mislead the markets by adopting creative accounting techniques.
3. The entity's share price will reflect the net present value of its future cash flows, so managers must only ensure that all investments are expected to exceed the company's cost of capital.
4. Large quantities of new shares can be sold without depressing the share price.
5. Mergers and takeovers. If shares are correctly priced this means that the rationale behind mergers and takeovers may be questioned. If companies are acquired at their current market valuation then the purchasers will only gain if they can generate synergies (operating economies or rationalization). In an efficient market these synergies would be known, and therefore already incorporated into the price demanded by the target company shareholders.

The more efficient the market is, the less the opportunity to make a speculative profit because it become impossible to consistently out-perform the market.

Evidence so far collected suggests that stock markets show efficiency that is at least weak form, but tending more towards a semi-strong form. In other words, current share prices reflect all or most publicly available information about companies and their securities.

The valuation of shares:

Fundamental analysis is based on the theory that share prices can be derived from a rational analysis of **future dividends**.

Technical analysts or **chartists** work on the basis that past price patterns will be repeated, therefore future price movements can be predicted from historical patterns of share price movements in the past, and there are some patterns that continually reappear.

Random walk theory is based on the idea that share prices will alter when new information becomes available.

Share prices are also affected by **marketability** and **liquidity** of shares, availability and sources of **information**, **market imperfections** and **pricing anomalies**, **market capitalization** and **investor speculation**