G. BUSINESS VALUATIONS

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Nature and Purpose of the Valuation of Business and Financial Assets

When are valuations required?

Valuations are required when:

- It is an unquoted company, there is a take over bid and the offer price is an estimated “fair value’ in excess of the current market price of the shares.
- For unquoted companies when the company wishes to go public and must fix an issue price for its shares
- For unquoted companies when there is a scheme of merger
- For unquoted companies when shares are sold
- For unquoted companies when shares need to be valued for the purpose of taxation
- For unquoted companies when shares are pledge as collateral for a loan
- For subsidiary companies when the group’s holding company is negotiating the sale of the subsidiary to a management buyout team or to an external buyer
- For any company where a shareholder wishes to dispose of his holding
- For any company when the company is being broken up in a liquidation situation
- For any company when the company needs to obtain finance, or re-finance current debt

Models for the Valuation of Shares

What is market capitalisation?

Market capitalisation is the market value of a company’s shares multiplied by the number of issued shares.

What is the net asset method of share valuation?

The net asset valuation method can be used as one of many valuation methods; it can provide a lower limit for the value of a company. In this method the value of a share in a particular class is equal to the net tangible assets divided by the number of shares. Intangible assets, such as, goodwill are excluded. However, if an intangible asset has a market value then it should be included.

What are some possible problems with valuing assets?

Asset values can be difficult because values ought to be realistic and attaching a figure to an individual asset may vary considerably depending on whether it is valued on a going concern or a break-up basis. Assets values can be based on:
- Historic basis
- Replacement basis (going concern basis)
- Realisable basis (break-up basis)

**Factors to consider when valuing under the net asset method:**

- Do the assets need professional valuation?
- What are the costs of professional valuation?
- Have the liabilities been accurately quantified?
- Are they any contingent liabilities?
- Are all receivables collectable?
- Are all inventories realisable?
- Can all the assets be physically located and brought into a saleable condition?
- Can any hidden liabilities be accurately assessed (redundancy payments and closure costs)?
- Are there any available markets in which assets can be realised?
- Are there any prior charges on the assets?
- Does the business have a regular revaluation and replacement policy?

**What is the P/E ratio method of valuation?**

P/E ratios are used when a large block of shares, or a whole business, is being valued. 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 that are being valued. It is this a method that reflects the earnings potential of a company from a market point of view.

Since, P/E ratio = Market value per share / EPS

Then, market valuation per share = EPS x P/E ratio

The higher the better!

**Problems with using P/E ratios of quoted companies to value unquoted companies**

- Finding a quoted company with a similar range of activities may be difficult
- Quoted companies are often diversified
- A single year's P/E ratio may not be a good basis if:
  - Earnings are volatile
  - Share price is at an abnormal level due to an expectation of a take over bid
- P/E ratio uses historical data to value an unquoted company in the future
- The quoted company may have a different capital structure

**Notes:**

A bidder company may sometimes use their higher P/E ratio to value a target company. This assumes that the bidder can improve the target company’s business, which may be a dangerous assumption to make.

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

For examination purposes, you should normally take a figure around one half to two thirds of the industry average when valuing an unquoted company.
What is the “earnings yield” valuation method?

This method is effectively a variation on the P/E method using an appropriate earnings yield effectively as a discount rate to value the earnings.

If, Earnings Yield = EPS / Market price per share x 100%

Then, Market value = EPS / EY

The lower the better!

Incorporating earnings growth in this model, then

Market value = EPS x (1 + g) / (Ke – g)

Growth % = \( n \sqrt{D_0/D_n} - 1 \)

What is the cash flow based valuation model (or dividend valuation model)?

The dividend valuation model is a cash flow based approach, which values the dividends that the shareholders expect to receive from the company by discounting them at their required rate of return. It is more appropriate for valuing a minority shareholding where the holder has no influence over the level of dividends to be paid than for valuing a whole company, where the total cash flows will be of greater relevance. The dividend valuation model is based on the theory that an equilibrium price for any share on a stock market is 1) the future expected stream of income from the security 2) discounted at a suitable cost of capital. Equilibrium market price is thus a present value of a future expected income stream. The annual income stream for a share is the expected dividend every year in perpetuity. Therefore:

MV (ex div) = D/Ke

Incorporating growth using the dividend growth mode:

MV (or P0) = D0 x (1 + g)/Ke – g

Assumptions of the dividend valuation model:

- Assumes that investors act rationally and homogenously
- Assumes that future dividends, prices and cost of capital are reasonable
- Assumes directors use dividends to signal the strength of the company’s position
- Assumes dividends show no growth or constant growth
- Assumes there are no other influences on share prices
- Assumes the company’s earnings will increase sufficiently to maintain dividend growth levels

What is the discounted cash flow basis of valuation?
This 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 Valuation of Debt and Other Financial Assets**

**For irredeemable debt:**

If, \( K_d = i \times (1 - T) / P_0 \)

Then, Market value (or \( P_0 \)) = \( i \times (1 - T) / K_d \)

**For redeemable debt:**

The valuation of redeemable debt spends on future expected receipts. The market value is the discounted present value of future interest receivable, up to the year of redemption, plus the discounted present value of the redemption payment.

Value of debt = (interest earnings x annuity factor) + (Redemption value x DCF)

**Convertible debt:**

When convertible bonds are traded on a stock market, its minimum market price will be the price of straight bonds with the same coupon rate of interest. If the market value falls to this minimum, it follows that the market attaches no value to the conversion rights. If the conversion value rises above the straight debt value then the price of convertible bonds will normally reflect this increase.

The current market value of a convertible bond where conversion is expected is the sum of the present values of the future interest payments and the present value of the bond’s conversion value.

Therefore, \( P_0 (1 + g)^n / \# \text{ of shares received on conversion} \)

**Preference shares:**

\( P_0 = D / K_d \)

**Efficient Market Hypothesis (EMH) and Practical Considerations in the Valuation of Shares**

**What is the efficient market hypothesis?**

The efficient market hypothesis is the hypothesis that the stock market reacts immediately to all the information that is available. Three forms of the efficient market hypothesis can explain the theory behind share price movements. These are:

- **Weak form efficiency**
  Weak form efficiency implies that prices reflect all relevant information about past price movements and their implications. Share prices reflect all available information about past changes in the share price. Since new information arrives unexpectedly, changes in share prices should occur in a random fashion. Technical analysis to study past share price movements will not give anyone an advantage,
because the information they use to predict share prices is already reflected in the share price.

- **Semi-strong form efficiency**
  Semi-strong form implies that share prices reflect all relevant information about past price movement and their implications, and all knowledge that is available publicly. Therefore, an individual cannot beat the market by reading the newspaper or annual reports since the information contained in these will be reflected in the share price.

- **Strong form efficiency**
  This implies that prices reflect past price movements, publicly available knowledge and inside knowledge.

**What are the different types of efficiencies that can be distinguish in the context of the operation of financial markets?**

**Allocative efficiency:**

 Allocative efficiency can be achieved if financial markets allow funds to be directed towards firms that make the most productive use of them.

**Operational efficiency:**

 Operational efficiency can be achieved if there is open competition between brokers and other market participants so that transaction costs are kept as low as possible.

**Informational processing efficiency:**

 Information processing efficiency of a stock market can be achieved if the stock market is able to price stocks and shares fairly and quickly because market prices of all securities reflect all the available information.

**Features of an efficient market:**

- The prices of securities bought and sold reflect all the relevant information that is available to buyers and sellers
- No individual dominates the market
- Transaction costs of buying and selling are not so high as to discourage trading significantly
- Investors are rational
- There are low to no costs of acquiring information

**Note:**

- If the stock market is efficient, share prices should vary in a rational way, therefore:
  - If a company makes an investment with a positive net present value, shareholders will find out about it and the market price of its shares will rise in anticipation of future dividend increases
  - If a company makes a bad investment shareholders will find out about it and the price of its shares will fall
  - If interest rates rise, shareholders will want a higher return from their investments, therefore, market prices will fall
What is the fundamental theory of share values?

The fundamental theory of share values is the theory that the realistic market price of a share can be derived from a valuation of estimated future dividends. The value of a share will be the discounted present value of all future expected dividends on the shares, discounted at the shareholders’ cost of capital. If this theory is true then the share price will be predictable provided that investors have the same information about the company’s expected future profits and dividends, and the cost of capital.

What is charting or technical analysis theory?

Chartists or technical analyst theory attempts to predict share price movements by assuming that past price patterns will be repeated. One problem with Chartism is that it is often difficult to see a new trend until after it has happened. By the time the chartist has detected a signal, other chartists will have as well, and the resulting mass movement to buy or sell will push the price so as to eliminate any advantage. Studies have found that the results obtained were no better or worse than those obtained from a simple buy and hold strategy of a well-diversified portfolio of shares.

What is the random walk theory?

The random walk theory accepts that a share should have an intrinsic price dependent on the fortunes of the company and the expectations of investors. It assumes that all relevant information about a company is available to all potential investors who will act upon the information in a rational manner. The key feature, however, is that as new information becomes available, the behavior of investors is such that actual share price will fluctuate from day to day around the intrinsic value.

THE END.