

# GUIDANCE ON VALUATION OF SHARES AND BUSINESSES

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Valuation refers to determination of the worth of an asset using information available from the financial statements publications.

Share valuation embraces numerous different facets of financial management and the type of questions set usually vary significantly. Therefore, it requires an in-depth appreciation of many commercial and financial matters and hence requires a good background of financial knowledge.

Share valuation is carried out by financial experts/analysts in the stock market. The value they compute is usually called Theoretical/Intrinsic/real value. Theoretical value is different from market value/price of a share as quoted on the stock exchange. The comparison of the two values (market and theoretical) form the basis of stating whether a share is under valued or overvalued.

Prices quoted by the stock exchange are treated for many purposes as gospel pronouncements on shares worth but the prices may not be directly related to the value of companies' assets or amounts of their profits and consequently these prices no matter what dates may be chosen for reference, cannot form a fair and equitable or rational basis for compensation.

The quoted price is determined by the demand and supply mechanism in the stock market. The stock exchange is a scientific recording instrument, which registers the actions and opinions of private and institutional investors all over the country and indeed the world. These actions and opinions are the results of hope, fear, guesswork, intelligence or otherwise good or bad investment policies of the firms and many other variations.

## WHY VALUE SHARES

From the foregoing discussion, there are all indicators that the price quoted on stock exchange is distorted. It does not reflect the real value of a share. If the market price is higher than Theoretical/real value, the share is said to be overvalued in the market and vice versa. Shares and physical assets are valued by financial experts for various reasons.

- i) *Mergers and acquisitions* – The value of shares of each company involved in the merger must be assessed.
- ii) *Collateral/Security* – When shares have to be pledged as a collateral for a loan.
- iii) *Taxation* – There's need to assess a valuation for purposes of taxation especially for physical assets.
- iv) *Going public* – When an unquoted company wishes to “go public” the value of it shares must be fixed.
- v) *Liquidation* – There is need to value shares incase the firm is being wound-up
- vi) *Disposal* – When a major shareholder of unquoted company wish to dispose shares, there is need to assess their value.
- vii) *Take-over bid* – For quoted companies, a take-over bid will require estimation of offer price at “fair value” in excess of the current market price per share.

## TARGET GROUP

Valuation of shares is of critical interest to all students sitting for Business/Accounting professional exams. The targeted groups are:

- a) Section 3 (CPA & CPS) – Business Finance
- b) Section 6 (CPA & CPS) – Financial Management
- c) ACCA Paper 14 – Financial Strategy
- d) B.Commerce students specializing in Finance
- e) Students undertaking Certified Financial Analysts (CFA) exams.

To illustrate how valuation of shares occur, a past paper professional exam question in Financial Management will be used.

### **Question**

Summarized below is the financial data in respect of Kevinko Ltd.

Profit and Loss Accounts for the years ended 31 March

	1998 Sh.'000'	1999 Sh.'000'	2000 Sh.'000'
Turnover	<u>76,270</u>	<u>89,410</u>	<u>102,300</u>
Taxable Income	10,140	12,260	14,190
Taxation	<u>3,549</u>	<u>4,291</u>	<u>4,966</u>
Net Profit	6,591	7,969	9,224
Dividends	<u>2,335</u>	<u>2,557</u>	<u>2,800</u>
Retention	<u>4,255</u>	<u>5,412</u>	<u>6,424</u>

Balance Sheet as at 31 March 2000

	Sh.'000'
Fixed Assets	54,200
Current Assets	39,500
Current Liabilities	<u>(26,200)</u>
	<u>67,500</u>
Ordinary shares (Sh.5 par value)	20,000
Reserves	32,500
10% Debentures (due 2000 par Sh.100)	<u>16,000</u>
	<u>67,500</u>

As a result of recent capital expansion, market analysis expect pre-tax earnings to increase at the rate of 25% for the next two years before reverting to the company's existing growth rate. The company's overall beta is 0.763 while the beta for debt is 0.20. The risk free rate is 12% and the market return is 17%. Currently, the shares of the company are selling at Sh.21.70 on the stock exchange cum 2000 dividend. The debentures are selling at Sh.89.50 ex-interest. The corporate tax rate is 35%.

### **Required:**

- a) Using the dividend growth model, explain what a fundamental analysis might consider to be the intrinsic value of Kevinko's shares. Comment on this value.

- b) If interest rates were to go up by 5%, what would be the effect of this increase on the company's share price?
- c) What is the difference between fundamental analysis and a chartist's analysis in the valuation of shares?

**Suggested Solution:**

1. Compute the current market price per share ex-div

Cum – div M.P.S.		Shs. 21.70
Less year 2000 DPS	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <div style="text-align: center;"> <u>Dividends paid</u>            No. Ordinary shares            = <math>\frac{2,800,000}{4,000,000}</math> </div> </div>	→ 0.70
Current MPS ex-div		21.00 =====

2. Determine the expected growth rate from past stream of dividends (between 1998 – 2000) using compounding method.

$$\text{Div}_0(1+g)^n = \text{div}_n$$

Where:  $\text{div}_0$  = dividend paid at the beginning of first year of growth (1999) = Sh.2,335,000  
 $\text{div}_n$  = dividends paid at end of last year of growth.  
 (Year 2000) = 2,800,000

$n$  = number of years of growth = 2 yrs.

$$\frac{2335(1+g)^2}{2335} = \frac{2800}{2335}$$

$$\sqrt{(1+g)^2} = \sqrt{1.1991}$$

$$\begin{aligned} (1+g) &= 1.095 \\ g &= 0.095 = 9.5\% \end{aligned}$$

3. Determine the Beta factor of Equity/ordinary shares. Beta factor indicates the sensitivity of returns of a security to systematic risk (undiversifiable risk) such as:
- inflation
  - political instability
  - increase in corporate tax

A security with a better factor of less than one is said to be defensive while a security with a beta of more than one is said to be aggressive .

The overall beta (also called asset beta) indicates the overall sensitivity of returns of a firm's securities to systematic risk.

$$\text{Overall (asset) beta } (B_o) = B_e \left( \frac{E}{E+D} \right) + B_d \left( \frac{D}{E+D} \right)$$

Where:  $B_e$  = equity Beta

$B_o$  = Overall Beta = 0.763

E and D = Market values of equity and debt capital respectively

$B_d$  = debt capital beta factor = 0.20

$$E = \text{MPS (ex-div)} \times \text{number of ord. Shares} = 21 \times 4,000,000 = \text{Sh. "Ms". } 84.000$$

$$D = \text{MPS (ex-int)} \times \text{number of debentures} = 89.50 \times \frac{15,000,000}{100} = \underline{13.425}$$

$$E + D = \text{Total market value of the firm.} \quad \underline{\underline{97.425}}$$

$$0.763 = B_e \left( \frac{84M}{97.425} \right) + 0.2 \left( \frac{13.425M}{97.425M} \right)$$

$$0.763 = 0.8622B_e + 0.0276$$

$$0.8622 B_e = 0.7354$$

$$B_e = 0.853$$

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4. Having determined the equity Beta ( $B_e$ ), it is now possible to determine the discounting rate/required rate of return using capital asset pricing model (CAPM).

Required rate of return = Risk free rate + (market return ( $R_m$ ) –  $R_f$ )  $B_e$

$$= 12 + (17 - 12) 0.853 = 16.3\%$$

5. The theoretical value of an ordinary share can be determined using Gordon's/dividend yield model. However, it is important to note the supernormal growth aspect of 25% p.a. for the next 2 years. The DPS to use is that of year 2000 (Sh.0.70).

The valuation is according to the fundamental theory where the intrinsic/theoretical value of a share is equal to the total present value of all expected income (dividends) from a share.

Year	Expected D.P.S.	P.V.I.F <sub>16.3%</sub>	P.V
1	$0.7(1.25)^1 = 0.875$	0.860	0.75
2	$0.7(1.25)^2 = 1.094$	0.739	0.81
3 - $\infty$ ( $w_1$ ) = $P_o$	17.617	0.739	<u>13.02</u>
Total P.V = Theoretical value of a share			<u><u>14.58</u></u>

$$W_1 = P_o = \frac{do(1+g)}{ke - g} = \frac{1.094(1.095)}{0.163 - 0.095} = 17.617$$

6. Determine whether the share is over or under valued.

Theoretical value	Sh.14.58
Market value (ex – div)	Sh.21.00

The market value is higher than theoretical value hence the share is overvalued. A potential investor should not buy such a share.

- (b) - Increase in interest rates increases the cost of debt. This is an indicator of the riskiness of debt capital hence the debt Beta will increase leading to increase in overall Beta.

-With increased overall risk (Beta), the value of a share will decline.

-Alternatively, increase in interest rates means that returns in the money market are higher than in the stock market. Investors will thus liquidate their investments in stock market and channel them to money market. With high supply of share in stock market, prices will decline.

- c) Fundamental analysis is one of the views/theories of share valuation. Fundamental analysis states that the intrinsic value of a security is equal to the total P.V of all cash inflows/benefits (dividends and interest) derived from that security.

The benefits are discounted at the shareholder's required rate of return. The expectation of future cash flows will be influenced by factors such as:

- \* Expectations of investors
- \* Political stability in the country
- \* Future plans and expectations of the firm
- \* Influences affecting the economy as a whole

Chartist (also called Technical) analysis. The theory states that the past price pattern of shares will replicate themselves in future (History repeats itself).

- Past price patterns are thus charted on a graph and the trend is expected to be the same in future. It identifies 3 types of price patterns.
  - a) Primary trends/patterns – for price patterns observed and charted for a period of one year and above.
  - b) Secondary pattern – for price patterns observed and charted on seasonal monthly basis.
  - c) Tertiary trends – for price pattern occurring on weekly and daily basis.

### **Conclusion:**

Share valuation by financial experts will guide the potential investors. If shares are undervalued, they should be bought since there is a chance of increase in future thereby making capital gains (selling price less buying price) in addition to dividend income.