

Class :	B.Com.	Prepared By Dr. Mohd Arif Assistant Professor Faculty of Commerce Sri Jai Narain Misra PG College, Lucknow
Semester:	II	
Subject:	Concepts in Valuation	
Unit:	4	
Title:	Valuation of Common Stock (Equity Share)	

Meaning of Valuation

Valuation is the process of forecasting the present value of the expected payoffs to shareholders and of converting this forecast into one number that corresponds to the fundamental-intrinsic firm value.

Equity shares can be described more easily than fixed income securities. However, they are more difficult to analyze. Fixed income securities typically have a limited life and a well-defined cash flow stream. While the basic principles of valuation are the same for fixed income securities as well as equity shares, the factors of growth and risk create greater complexity in the case of equity shares.

Valuation of shares is the process of assigning a rupee value to a specific share or knowing the value of company's shares. Share valuation is done based on quantitative techniques and share value will vary depending on the market demand and supply.

Models for Share Valuation

The various model used for Equity valuation are:

- A) Based on Balance Sheet
- B) Based on Dividend Distributed (Dividend Valuation Model)
- C) Other Valuation Models

A) Based on Balance Sheet

Under this approach, the evaluator uses the balance sheet of the company for determining the value of share. Generally it consists of the following methods:

- 1) **Book Value:** It is the net worth of a company divided by number of outstanding shares. Net worth is equal to paid-up equity capital plus reserves and surplus minus losses.
- 2) **Liquidation Value:** Liquidation value is different than a book valuation. Liquidation value can be used to determine the bare bottom benchmark value of a business.

The liquidation value per share:

$$= \frac{\text{Value realised from liquidating all the assets of the firm} - \text{Amount to be paid to all the creditors and preference shareholders}}{\text{Number of outstanding equity shares}}$$

- 3) **Replacement Cost:** Replacement costs provide an alternative way of valuing a company's assets. The replacement, or current, cost of an asset is the amount of money required to replace the asset by purchasing a similar asset with identical future service capabilities. In replacement cost, assets and liabilities are valued at their cost to replace.

B) Based on Dividend Distributed (Dividend Discounted Model)

One of the most widely used equity valuation model is the dividend discount model (DDM). According to the dividend discount model, the value of an equity share is equal to the present value of dividends expected from its ownership plus the present value of the sale price expected when the equity share is sold.

- 1) **Single-Period Valuation Model:** The investor expects to hold the equity share for one year. The price of the equity share will be:

$$P_0 = \frac{D_1}{(1+k)} + \frac{P_1}{(1+k)}$$

where, P_0 = current price of the equity share

D_1 = dividend expected a year hence

P_1 = price of the share expected a year hence

k = cost of capital/discounting rate

- 2) **Multi-Period Valuation Model:** In Multi-Period valuation, equity shares have no maturity period, they may be expected to bring a dividend stream of infinite duration. Hence the value of an equity share may be put as:

$$P_0 = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \dots + \frac{D_\infty}{(1+k)^\infty} = \sum_{t=1}^{\infty} \frac{D_t}{(1+k)^t}$$

where, P_0 = current price of the equity share

D_1 = dividend expected a year hence

D_2 = dividend expected two years hence

D_∞ = dividend expected at the end of infinity period

k = cost of capital/discounting rate

n = number of years

P_n = Price at finite period

In case of Finite Period:

$$P_0 = \frac{D_1}{(1+k)^1} + \frac{D_2}{(1+k)^2} + \dots + \frac{D_n}{(1+k)^n} + \frac{P_n}{(1+k)^n}$$

$$= \sum_{t=1}^n \frac{D_t}{(1+k)^t} + \frac{P_n}{(1+k)^n}$$

- 3) **Zero Growth Model:** The most basic of all the DDMs is the zero growth model. This model assumes that dividend will be constant over time, so that growth is zero, and that the investor's required rate of return is constant. The model is:

$$P_0 = \frac{D}{(1+k)^1} + \frac{D}{(1+k)^2} + \dots + \frac{D}{(1+k)} + \frac{D}{(1+k)^\infty}$$

or

$$P_0 = \frac{D}{k}$$

- 4) **Constant Growth Model (Gordon Model):** It is one of the most popular dividend discount models proposed by Myron J. Gordon. It assumes that the dividend per share grows at a constant rate (g). The value of a share, under this model can be calculated with the help of following formula:

$$P_0 = \frac{D_1}{(1+k)} + \frac{D_1(1+g)}{(1+k)^2} + \dots + \frac{D_1(1+g)^n}{(1+k)^{n+1}} + \dots$$

$$P_0 = \frac{D_1}{k-g}$$

where, P_0 = current price of the equity share

D_1 = dividend expected a year hence

g = constant growth rate

k = cost of capital/discounting rate

n= number of years

C) Other Valuation Models

- 1) **Price-Earnings Ratio Method:** This method is generally used to calculate listed Company Share Value. It uses Earning Per Share (EPS) & Market Price of Share (MPS) to calculate value of share.

$$P/E \text{ Ratio} = \text{Market price per share} / \text{Earnings per share}$$

- 2) **Walter's Approach:** Prof. Walter's approach supports that dividend policy has an effect on the market price of the share. This model considers that the investment decision and dividend decisions of the firm are inter-related. Prof Walter's model is based on the relationship between the firm's return on investment (r) and required rate of return (k). Prof. Walter has given the following formula to ascertain the market price of a share:

$$p = \frac{D + r \frac{(E - D)}{k_e}}{k_e}$$

Where, P = market price per share

r = internal rate of return

k_e = cost of equity capital

D = dividend per share

E = earnings per share

Reference

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