INTRINSIC VALUE OF SHARE/STOCK

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Valuation of Share

▶ Valuation of shares is the **process of knowing the value** of a company's shares.

▶ Value of shares depends upon both **quantitative & qualitative factors**.

▶ Quantitative factors mainly include **financial position** of the company whereas qualitative factors include **reputation/image/people's perception** about the company's growth & future.

▶ The share price of the listed companies which are **traded publicly** can be known easily but w.r.t private companies whose shares are **not publicly traded**, valuation of their shares is really challenging.

▶ Valuation of shares is very important for all its **stakeholders, government, governmental departments & for national economy as a whole**.

When valuation of shares is required?

- On **buy/sale of the business** to know the business value.

- For **obtaining bank loan** based on shares as a security.

- On the event of **merger, acquisition, reconstruction, amalgamation,** etc.

- In the event of **conversion of shares** (for e.g. Preference to Equity)

- At the time of offering **Employee Stock Ownership Plan** (ESOP)

- In case of **litigation**, where share valuation is legally required **& so on...**

Three important methods of valuing shares

1. Book Value

2. Market Value

3. Intrinsic Value

Book Value

▶ The book value literally means the value of a business according to its books of accounts, as reflected on its latest audited financial statements.

▶ Theoretically, it is what investors (ordinary shareholders) would get if they sold all the company's assets and paid all its debts and obligations.

▶ Book value is roughly equal to the amount ordinary stockholders would receive if they decided to liquidate the company.

Calculation of Book Value Per Share (BVPS)

BVPS is the ratio of net assets available for ordinary equity shareholders divided by the number of outstanding shares.

$$BVPS = \frac{Total\ Assets - Outside\ Liabilities - Preference\ Capital\ (Incl.\ arrears\ of\ Dividend)}{Number\ of\ Outstanding\ Ordinary\ Equity\ Shares}$$

Market Value

▶ Market value of shares is a price at which respective securities are traded in a stock exchange. It is essentially the price at which you can purchase or sell any share in the stock market.

▶ Stock market value is heavily dependent upon the market demand & supply for such shares, which, in turn, is determined by the overall performance and growth potential of a company.

▶ In case of companies whose shares are not traded in market, market value per share is calculated as the total market value of the business divided by the total number of shares outstanding.

Intrinsic Value

- Intrinsic value is the **anticipated or calculated** value of a company's stock determined through **fundamental analysis**.
- It considers **qualitative and quantitative factors**.
- The qualitative factors include the business model, governance, and market factors, whereas the quantitative factors such as financial statement analysis.
- Intrinsic value is also called as **REAL VALUE** or **FUNDAMENTAL VALUE** of the share.
- It **may or may not be the same** as the current market value.

- It is also referred to as the **price a rational investor is willing to pay** for an investment.
- Most "standard" approach for calculating intrinsic value is similar to the **net present value formula**.
- It is an estimation or projection on the future value of its stock price based on business historical performance.
- The fundamental or the intrinsic value of a business or any investment asset is generally considered as the **present value of all future cash flows discounted at an appropriate discount rate**.
- The computed intrinsic value is then compared with the market value to determine if the stock is overvalued or undervalued & accordingly **investment decisions** are taken.

Most commonly used models for determining intrinsic value of share

▶ **Discounted Cash Flow (DCF)** model is the most used approach to arrive at the intrinsic value. In this method, the analyst forecasts the future cash flow of the business and discount it to present value by using the firm's Weighted Average Cost of Capital. This method is used by the investors when they are willing to acquire the whole company or controlling interest in the company.

▶ Similarly, when an investor is willing to purchase few shares of a company as an investment then he uses **Dividend Discount Model (DDM)** to derive the intrinsic value of the share.

▶ Above computed value is the maximum amount that investor would be willing to pay for investment.

Discounted Cash Flow (DCF) Model

► Calculating the intrinsic value of a company using the DCF model require three inputs:

1. The estimated future cash flows of the company.

2. The discount rate to determine the present value of the estimated future cash flows.

3. A method for valuing the company at the end of our cash flow estimate, often referred to as terminal value.

► Formula for calculating intrinsic value:

$$DCF = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \dots + \frac{TV}{(1+r)^n}$$

Where:
DCF = Discounted cash flow, or the present intrinsic value of the company.
CF = Cash flow in years one, two, and so on.
TV = Terminal value.
R = The discount rate.

Dividend Discount Model (DDM)

▶ Calculating the intrinsic value of a share using the DDM require three inputs:

1. The expected dividends to be received after one year from the present.

2. The required rate of return investor is expecting from the proposed investment.

3. Annual growth rate in dividend.

► One popular model for finding a company share's intrinsic value is the DDM. The basic formula of the DDM is as follows:

$$P = D_1/(r-g)$$

where:

P =Present value of stock

D_1 =Expected dividends one year from the present

r =Required rate of return for equity investors

g =Annual growth rate in dividends in perpetuity

► The above formula is also known as **Gordon Growth Model.**

Challenges With Intrinsic Value

▶ One of the difficulties with the value is that the method of intrinsic computing is a very **subjective exercise**.

▶ The technique **involves numerous assumptions** to project the cash flow.

▶ Thus, the final net present value is **sensitive to changes** in these assumptions.

▶ Another challenge is that while computing the weighted average cost of capital (WACC), the factors such as **beta, market risk premium, etc. can be calculated differently**. Also, the probability factor that is used is subjective.

▶ Lastly, the **future is uncertain**. Thus, while using the method, different investors can arrive at different values for the same asset. This difference is because everyone has a different way of looking at the future. Moreover, there is no way to say which number is accurate.

Differences between
Intrinsic Value & Market Value

Intrinsic Value

- ▶ It is an estimate of the actual true value of a company's stock.
- ▶ It is determined by investors using financial pricing models.
- ▶ It is calculated at the time of decision making.
- ▶ Its determination involves use of assumptions like Discounting Rate, Growth Rate & Future Cash Flows.

Market Value

- ▶ It is the current value of the stock as set by the market.
- ▶ It is determined by supply and demand for a particular stock.
- ▶ It is pre-determined & can be obtained from market.
- ▶ Its determination does not involve use of assumptions.

▶ Let us understand the concept with examples:

<u>Example 1</u>: Mr. A wants to invest in shares of Paytm which is trading @ Rs. 1,612.50/- in stock market. Mr. A's required rate of return is 8%. Company is expecting to pay dividend of Rs. 15/- after one year which is expected to grow @ 5% p.a.

Now, in order to determine whether Mr. A should invest, he need to determine intrinsic value of the share.

Intrinsic Value of share using DDM

$$P = D_1/(r-g)$$
$$= 15/(8-5)\%$$
$$= Rs. 500/-$$

Now, maximum Mr. A would be willing to pay is Rs. 500/- for Paytm's share. In this example, Mr. A will not buy the share because it is overvalued in the market.

If this share would be available at a price below Rs. 500/- then Mr. A would be willing to buy the Paytm's share.

Example 2: B Ltd wants to acquire Nykaa company whose shares are trading @ Rs. 2,209.35/- in stock market. Total number of outstanding shares are 50,000. Assume Nykaa's weighted average cost of capital (WACC) is 10%. Company's last year cash flow was Rs. 150 Lakhs which is expected to grow @ 5% p.a. for 5 years & terminal value at the end of 5th year is Rs. 800 Lakhs.

Now, in order to determine whether B Ltd should acquire Nykaa, it needs to determine intrinsic value of the Nykaa.

Intrinsic Value of Nykaa's share using DCF Method:

Year	Cash Flow	Discounting Factor	Present Value
1	1,57,50,000	0.909	1,43,16,750
2	1,65,37,500	0.826	1,36,59,975
3	1,73,64,375	0.751	1,30,40,645
4	1,82,32,594	0.683	1,24,52,862
5	1,91,44,224 + 8,00,00,000 = 9,91,44,224	0.621	6,15,68,563
		Total	11,50,38,795

Intrinsic Value per share   =   Present value of total cash flow
                                              —————————————————————————
                                              Total Number Outstanding Shares

                                          =   11,50,38,795/50,000

                                          =   Rs. 2,300.76/-

Since the share is trading at Rs. 2,209.35/-, which is lower than intrinsic value
Rs. 2,300.76/-. Hence, B Ltd should acquire the Nykaa Company as its
shares are undervalued in the stock market.

Conclusion

Intrinsic value is true value of a stock or any asset. It is used by investor (specifically by value investors) for the purpose of decision making. Computed intrinsic value is compared with the market value & investment decisions are taken. Thumb rule for the decision is that if intrinsic value is higher than market value then investment should be made because the stock is undervalued. Whereas, if intrinsic value is lower then investment shouldn't be made because the stock is overvalued in the market.

Note: Before taking any decisions on the basis of intrinsic value, care should be taken because computation of intrinsic value involves use of estimates & assumptions. At times assumptions made, may get right & may get wrong.

Thank
You