

## MB FC 01: Security Analysis & Portfolio Management

### Unit – III (Fundamental Analysis: Company Analysis Part - II)

#### **Fundamental Analysis Tools:**

Although the raw data of the Financial Statement has some useful information, much more can be understood about the value of a stock by applying a variety of tools to the financial data.

1. Earnings per Share – EPS
2. Price to Earnings Ratio – P/E
3. Projected Earnings Growth – PEG
4. Price to Sales – P/S
5. Price to Book – P/B
6. Dividend Yield
7. Dividend Payout Ratio
8. Book Value per share
9. Return on Equity

#### **1. Earnings per Share**

The overall earnings of a company is not in itself a useful indicator of a stock's worth. Low earnings Coupled with low outstanding shares can be more valuable than high earnings with a high number of outstanding shares. Earnings per share are much more useful information than earnings by itself. Earnings per share (EPS) are calculated by dividing the net earnings by the number of outstanding shares.

Earnings per Share (EPS) = (Total Earning Available to Equity Shareholder)/ (Total No. of Equity Shares Outstanding)

For example: ABC company had net earnings of Rs, 10 lakhs and 100,000 outstanding shares for an EPS of 10 (1,000,000 / 100,000 = 10). This information is useful for comparing two companies in a certain industry but should not be the deciding factor when choosing stocks.

#### **2. Price to Earnings Ratio**

The Price to Earnings Ratio (P/E) shows the relationship between stock price and company earnings. It is calculated by dividing the share price by the Earnings per Share.

$P/E = \text{Stock Price} / \text{EPS}$

In our example above of ABC company the EPS is 10 so if it has a price per share of Rs. 50 the P/E is 5 (50 / 10 = 5). The P/E tells you how many investors are willing to pay for that particular company's earnings. P/E's can be read in a variety of ways. A high P/E could mean that the company is overpriced or it could mean that investors expect the company to continue to grow and generate profits. A low P/E could mean that investors are wary of the company or it could indicate a company that most investors have overlooked. Either way, further analysis is needed to determine the true value of a particular stock.

#### **3. Projected Earnings Growth Rate-PEG Ratio**

A ratio used to determine a stock's value while taking into account earnings growth. The calculation is as follows:  $PEG \text{ Ratio} = (\text{Price} / \text{Earnings Ratio}) / \text{Annual EPS Growth}$

PEG is a widely used indicator of a stock's potential value. It is favored by many over the price/ earnings ratio because it also accounts for growth. Similar to the P/E ratio, a lower PEG means that the stock is more undervalued.

Keep in mind that the numbers used are projected and, therefore, can be less accurate. Also, there are many variations using earnings from different time periods (i.e. one year vs. five year). Be sure to know the exact definition your source is using.

#### **4. Price to Sales Ratio**

When a company has no earnings, there are other tools available to help investors judge its worth. New companies in particular often have no earnings, but that does not mean they are bad investments. The Price to Sales ratio (P/S) is a useful tool for judging new companies. It is calculated by dividing the market cap (stock price times number of outstanding shares) by total revenues. An alternate method is to divide current share price by sales per share. P/S indicates the value the market places on sales. The lower the P/S the better the value.

$$PSR = (\text{Share Price}) / (\text{Revenue Per share})$$

### **5. Price to Book Ratio**

Book value is determined by subtracting liabilities from assets. The value of a growing company will always be more than book value because of the potential for future revenue. The price to book ratio (P/B) is the value the market places on the book value of the company. It is calculated by dividing the current price per share by the book value per share (book value / number of outstanding shares). Companies with a low P/B are good value and are often sought after by long term investors who see the potential of such companies. A lower P/B ratio could mean that the stock is undervalued. However, it could also mean that something is fundamentally wrong with the company. As with most ratios, be aware that this varies by industry. This ratio also gives some idea of whether you're paying too much for what would be left if the company went bankrupt immediately. It is also known as the "price-equity ratio".  $P/B = \text{Share Price} / \text{Book Value per Share}$

### **6. Dividend Yield (Return)**

Some investors are looking for stocks that can maximize dividend income. Dividend yield is useful for determining the percentage return a company pays in the form of dividends. It is calculated by dividing the annual dividend per share by the stock's price per share. Usually it is the older, well established companies that pay a higher percentage, and these companies also usually have a more consistent dividend history than younger companies. Dividend yield is calculated as follows:

$$\text{Dividend yield (Return)} = (\text{Annual Dividend per Share}) / (\text{Market Price per Share})$$

Dividend yield is a way to measure how much cash flow you are getting for each dollar invested in an equity position - in other words, how much "bang for your buck" you are getting from dividends. Investors who require a minimum stream of cash flow from their investment portfolio can secure this cash flow by investing in stocks paying relatively high, stable dividend yields.

To better explain the concept, refer to this dividend yield example: If two companies both pay annual dividends of Rs.1 per share, but ABC Company's stock is trading at Rs.20 while XYZ Company's stock is trading at Rs.40, then ABC has a dividend yield of 5% while XYZ is only yielding 2.5%. Thus, assuming all other factors is equivalent; an investor looking to supplement his or her income would likely prefer ABC's stock over that of XYZ.

### **7. Dividend payout ratio**

Dividend payout ratio is the fraction of net income a firm pays to its stockholders in dividends:

$$\text{Dividend payout ratio} = (\text{Dividends}) / (\text{Net Income for the same period})$$

The part of the earnings not paid to investors is left for investment to provide for future earnings growth. Investors seeking high current income and limited capital growth prefer companies with high Dividend payout ratio. However investors seeking capital growth may prefer lower payout ratio because capital gains are taxed at a lower rate. High growth firms in early life generally have low or zero payout ratios. As they mature, they tend to return more of the earnings back to investors. Note that dividend payout ratio is calculated as  $DPS/EPS$ .

$$\text{Calculated as:} = (\text{Yearly Dividend per share}) / (\text{Earning per Share})$$

$$\text{Or equivalently} = (\text{Dividends}) / (\text{Net Income})$$

The payout ratio provides an idea of how well earnings support the dividend payments. More mature companies tend to have a higher payout ratio.

### **8. Return on Equity**

Return on equity (ROE) is a measure of how much, in earnings a company generates in a time period compared to its shareholders' equity. It is typically calculated on a full-year basis (either the last financial year or the last four quarters).

#### Expanded Definition

When capital is tied up in a business, the owners of the capital want to see a good return on that capital. Looking at profit by itself is meaningless. I mean, if a company earns Rs.1 Lakh in net income, that's okay. But it's great if the capital invested to earn that is only Rs.2.5 Lakh (40% return) and terrible if the capital invested is Rs.25 Lakh (4% return).

Return on investment measures how profitable the company is for the owner of the investment. In this case, return on equity measures how profitable the company is for the equity owners, a.k.a. the shareholders.  $ROE = (\text{Net Income}) / (\text{Average Shareholders' Equity})$

The "average" is taken over the time period being calculated and is equal to "the sum of the beginning equity balance and the ending equity balance, divided by two." Return on equity is expressed as a percent and measures the return a company receives on its shareholder's equity. It is a much simpler version of return on invested capital. In general, the market is willing to pay a higher multiple for stocks with higher ROEs. As with every ratio, ROE should be compared to the company's industry and competitors. If a company is earning 35% ROE, that may sound great, but if the industry is earning 40% on average, then the investor should find out why the company is flying lower. Contrariwise, if its competitors are earning 25%, then the company may be a high flyer. However, don't invest based on just one ratio. Compare several ratios before making a decision.

#### DuPont model

This breaks ROE down into several components so that one can see how changes in one area of the business changes return on equity.

$$ROE = (\text{net margin}) \times (\text{asset turnover}) \times (\text{equity multiplier})$$

$$ROE = \frac{\text{net income}}{\text{revenue}} \times \frac{\text{revenue}}{\text{total assets}} \times \frac{\text{total assets}}{\text{equity}}$$

Return on equity grows, all else equal:

- the more net margin increases,
- the more revenue is generated from a firm's assets,
- The more leveraged a firm becomes.

While the first two seem fairly straight forward, the third one doesn't seem to be, but it really is. If revenue-generating assets are purchased through the use of debt (not equity), then the increased amount of net income generated by that greater amount of assets will increase the return on the fixed amount of equity.

#### Sustainable growth

Return on equity also ties into how much growth one can expect from a company. When a firm reinvests its net income, then it can be expected to grow. The fastest this can be expected to occur is the return on equity. This is calculated:

$$\text{Sustainable growth} = \text{Retention ratio} \times ROE$$

$$\text{Sustainable growth} = (1 - \text{Payout ratio}) \times ROE$$

$$\text{Sustainable growth} = (1 - \frac{\text{total dividend paid}}{\text{net income}}) \times ROE$$

#### A more refined definition

Common shareholders are interested in what return the company is making on their stake. To account for this, dividends paid out to preferred shareholders should be subtracted from net income before calculating ROE. So,  $ROE = (\text{Net Income} - \text{Preferred Dividends}) / (\text{Average Shareholders' Equity})$

### 9. Book Value per Share

A measure used by owners of common shares in a firm to determine the level of safety associated with each individual share after all debts are paid accordingly.

Book Value per Share =  $(\text{Total shareholder's Equity} - \text{Preferred Equity}) / (\text{Total Outstanding Shares})$

Should the company decide to dissolve, the book value per common indicates the dollar value remaining for common shareholders after all assets are liquidated and all debtors are paid. In simple terms it would be the amount of money that a holder of a common share would get if a company were to liquidate.

Fundamental analysis can be used to identify companies that represent good value. Hence it is good for long term investments. Valuation techniques vary depending on the industry group. For this reason, a different techniques or model is required for different industry. This can get quite time consuming and limit the amount of research that can be performed. In fundamental analysis, companies should be compared against other companies in the same sector. For example, a software company (Infosys Technologies) should be compared with a software company (Wipro), not to a bank (ICICI Bank).