

Fundamental Ratios

Equity Valuation basic tools and metrics

Analysts and investors look at different tools, ratios and metrics in order to value the price of a stock. As traders we won't value a stock but we will review the tools and metrics that other people use to value the stock so we can predict its movement when fundamental data changes.

Investors use equity valuation to find what the fundamental value of a stock is.

Value is defined as the rational value that investors would give to an asset if they had complete information about the nature of the stock.

Investors will use different tools and valuation models to define what the value of a stock is and then take a position by comparing their findings with the market price of the stock. The greater the deviation between market prices and valuation - the greater the likelihood of an investor taking a position.

Statement Examples:

Initial Public Offering of 3 companies			
	ABC	DEF	XYZ
Shares Outstanding	30,000,000	90,000,000	10,000,000
IPO Price	\$1.5	\$1.5	\$1.5

All 3 companies get a loan from the bank right away of \$2 million \$5 million and \$3 million respectively.

Exercise: Fill in their initial balance sheet.

Initial Balance Sheet			
	ABC	DEF	XYZ
Assets			
Liabilities			
Equity			

End of Fiscal Year 1 Income Statement			
	ABC	DEF	XYZ
Net Profit/Earnings	\$2,000,000	\$5,000,000	\$1,000,000

End of Fiscal Year 1 Cash Flow Statement			
	ABC	DEF	XYZ
Dividends	\$(2,000,000)	\$(1,000,000)	-

Exercise: Fill in the information for the End of Year Balance Sheet and calculate the appropriate Ratios.

End of Fiscal Year Balance Sheet			
	ABC	DEF	XYZ
Assets			
Liabilities			
Equity			

Numbers mean nothing by themselves. Especially when comparing companies of different sizes to each other (or even comparing a company to itself; since a company's own size can fluctuate throughout time). Because of this most of the time we will be looking at ratios in order to standardize these numbers.

Ratios			
	ABC	DEF	XYZ
Market Price	\$2	\$2.5	\$5
Market Cap			
Book Value			
Book/Share			
P/B			
EPS			
P/E			
ROE			
Dividend			
Dividend %			

Ratios:

There are many types of ratios that can be derived from the financial reports. These ratios can be categorized as follows:

- **Activity ratios:** This category includes ratios that measure asset utilization such as Turnover ratio, Total assets turnover.

- **Liquidity ratios:** Liquidity ratios: Measures ability of a company to pay short-term.

- **Solvency ratios:** Conveys information on the company's ability to pay long-term debt.

E.g. Debt to Equity ratio: $(\text{Total Debt} / \text{Total Shareholder's equity})$ – Indicates company's reliance on debt as a source of financing

- **Profitability ratios:** Profitability ratios: Provides information on how well the company generates profits from its operations.

Return on Equity: $\text{Net income} / \text{average total equity}$

- **Valuation ratios:** Provides investors information about relative value of stocks.

Essential Terms:

Shares outstanding: All the shares that have been issued by the company.

Market capitalization: This is the market value of a company's outstanding shares. You can get this value by multiplying the price of the stock times the quantity of shares outstanding. In general when we are categorizing companies in terms of their capitalisation we use these terms:

Small cap: \$300 million to \$2 billion

Mid cap: \$2 billion to \$10 billion

Large cap: over \$10 billion

Earnings: This is the net income (after-tax) that a company produces in a specific period. Usually we look at quarterly income as well as yearly income. A company's earnings is one of the most important things analysts and investors look at.

Dividends: A distribution made to shareholders of a corporation. This can be given from earnings, retained earnings or other cash that the company has. Changes to dividends and dividend growth has a huge impact on some stocks.

Earnings per share (EPS): This is by far the most important ratio in fundamental analysis. This is calculated by dividing the total earnings by the number of shares. It tells us the portion of the earnings that is allocated to each share.

Price per earnings (P/E): This tells us how much we are paying for every dollar of revenue the company currently generates. Calculation is done by dividing the current price by the company's EPS during the last 12 months.

Return on Equity (ROE) : This ratio is a measure of performance that calculates the amount of profits made by each dollar of shareholder's equity.

Book value: Calculation = Tangible assets - Liabilities. It is basically the amount of cash that would be left if the company sold everything it owned and paid off all its debt. This is also the shareholder's equity.

Book value per share: This tells us the per share value of a company. It is calculated by dividing the book value by the outstanding shares.

Price to book (P/B): This is used to gauge a company's market value to its book value. It is calculated by dividing the stock's price by last quarter's book value per share.

Debt to equity (D/E): This ratio shows how much of the company's assets are from debt versus from equity. The higher the ratio, the more leveraged the company is (meaning the more debt it is using to finance its operations).
