

FUNDAMENTAL ANALYSIS AS A TOOL FOR BETTER PORTFOLIO MANAGEMENT

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I. Introduction :

There is no subject more exciting than investments. Within investments, the movement of stock prices and the study of stock behavior have always been intriguing. From base dinner discussions to serious academic debates, the subject accommodates a number of theories, postulates and patterns. A lot of discussions have been on the dos and don'ts for successful investing and on the principles governing stock analysis. In fact, almost the entire world of financial theory finds applicability in stock analysis.

There are thousands of stocks available on a stock exchange; an investor is always in a dilemma which stock to buy, whether the stock will fetch me any returns, is there any scope for the industry to grow or should I look into some other sector.

One method to find solutions for these questions is fundamental analysis. Wherein we can know where an economy is heading, favorable industries in such economy and potential companies in such industries. Valuation of companies can be done using P/E valuation model, which will explain the expected growth in the company.

II. Objectives:

- To understand the economic analysis.
- To understand the valuation models.
- To practically apply the concepts.

III. Fundamental Analysis, A Three-step Process with Cases:

Fundamental Analysis is a tool, which employs a top-down approach that starts with the over all economy and securities market, and then works down from industry groups to specific companies. As part of the analysis process, it is important to remember that all information is relative. Industries are compared against other industries and companies against other companies. Usually, companies are compared with others in the same group. The above analysis involves making careful estimates of the expected stream of benefits and the required rate of return (this depends on the risk) for a common risk.

1. Economic Analysis

First and foremost in a top-down approach would be an overall evaluation of the general economy. The economy is like a tide; the various industries and individual companies are like boats. When the economy expands, most of the industries and

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companies benefit and grow. When the economy declines most sectors and companies usually suffer.

Economic Analysis involves a study of economic trends as indicated by the growth rate of gross domestic product, industrial growth rate, agriculture and monsoons, savings and investments, government budget and deficit, price level and inflation, interest rates, balance of payments, forex reserves, exchange rate, infrastructure facilities and arrangements. An analysis of the relationship between economic trends and economic policies and a study of the world economic trends and their impact on the Indian economy would also form a part of Economic Analysis.

Once a scenario for the overall economy has been developed, an investor can break down the economy into its various industry groups.

2. Industry Analysis

If the prognosis is for an expanding economy, then certain industries are likely to benefit more than others. An investor can narrow the field to those industries that are best suited to benefit from the current or future economic environment.

In Industry analysis, one needs to understand industry life cycle, the structure and characteristics of an industry like entry and exit barriers, key determinants of demand, pricing policy, licensing policy of the government, raw material and Labour availability, technology and research and profit potential of industry.

Let us take an example of the Indian Aluminium Industry to understand the parameters involved in industry analysis.

Indian Aluminium Industry

Key features:

- **Three Integrated Players:** Hindalco, Nalco and Sterlite Industries.
- Power is amongst the largest cost component in manufacturing of the non-ferrous metal, as the production process — smelting — involves electrolysis. Consequently, manufacturers are located near cheap and abundant sources of electricity such as hydroelectric power plants. Alternatively, they could set up captive power plants, which is the pattern in India. Indian manufacturers are the lowest cost producers of the base metal due to access to captive power, cheap labour and proximity to abundant supply of raw material — bauxite.
- The main consumer industries in India are electricals (power), transportation, consumer durables, packaging and construction. Of this, power is the biggest consumer (over 1/3rd of total) followed by transportation (about 18% of total).
- However, internationally, the pattern of consumption is in favour of transportation, primarily due to large-scale aluminium consumption by the aviation industry.

- The metal has a long working life due to its propensity for recycling. Recycled metal requires significantly less amounts of energy (5%) for manufacturing of primary aluminium.

Supply: Supply of aluminum is in excess and any deficit can be imported at low rates of duty. Currently, domestic production comfortably meets domestic requirements.

Demand: Demand for aluminium is estimated to grow at 6%-8% per annum in view of the low per capita consumption in India. Also, demand for the metal is expected to pick up as the scenario improves for user industries, like power and transportation, which closely track economic growth.

Barriers to Entry: Large economies of scale and high capital costs.

Competition: Competition is primarily on quality and price, as being a commodity, differentiation is difficult. However, the recent spate of consolidation has reduced the competitive pressure in the industry.

Prospects :

- Globally, newer packaging applications and increased usage in automobiles is expected to keep the international demand growth for aluminium between 2% - 4%. Asia will continue to be the high consumption growth area led by China, which has been and is expected to register double-digit growth rates in aluminium consumption.
- **China:** China requires alumina in the region of about 9-10 MT, while its current alumina capacity of about 5 MT (the deficit met through imports). This has had a positive impact on prices. The Chinese demand has been on the rise owing to huge infrastructure spending by its government. Moreover, with the Chinese economy continuing to power ahead with GDP growth rates in excess of 8%, the demand for consumer goods like white goods and cars have been on the rise.
- With key consuming industries forming part of the domestic core sector, the aluminium industry is sensitive to fluctuations in performance of the economy. Electricals and transportation account for more than 50% of domestic aluminium consumption. With the Government focusing towards attaining GDP growth rates above 8%, the key consuming industries are likely to lead the way, which could positively impact aluminium consumption. Domestic demand is estimated to grow by 6% - 8% YoY.
- Among the key concerns for the aluminium sector over the past two years is the volatility in crude prices. Higher energy prices could impact power costs leading to a squeeze in margins.

Thus, an in-depth analysis considering the features, competition level, barriers and future prospects of each industry should be undertaken which gives an overview as to how long the industry is favorable.

3. Company Analysis

A Company analysis involves various parameters like SWOT analysis of the company, its strategies, structure of the company. In other words, it includes understanding the product portfolio, availability and cost of inputs, technological and production capabilities, marketing and distribution, human resources and personnel employed, regulatory framework and any price controls applicable to the company and lastly the kind of management.

Study of financials includes studying of key ratios like return on equity, book value per share, earnings per share, dividend payout ratio, dividend per share etc. One should also look at compound annual growth rate (CAGR) at which the company is growing and can it sustain it for future. Few ratios are explained below:

Book Value (BV): It tells you the amount of assets behind each share. It is calculated as net worth divided by the number of equity shares.

$$\text{Net worth} = \text{Paid up equity capital} + \text{Reserves and Surplus}$$

Market cap: It means company's total stock market value. It helps in categorizing the company whether it is a small cap (less than Rs. 500cr), medium cap (more than Rs. 500cr and less than Rs. 3000cr) or large cap (more than Rs. 3000cr).

$$\text{Market cap} = \text{Number of outstanding shares} \times \text{Current market price}$$

EV/EBIDTA: EV refers to Enterprise Value. It is a measure of what the market believes a company's ongoing operations are worth.

$$\text{EV} = \text{Company's market cap} + \text{debt} + \text{preferred stock} - \text{cash and cash equivalents.}$$

EV/EBIDTA ratio indicates how much the market values a firm relative to the earnings it generates. Lower the value; more attractive the company is to the potential investors.

EPS: It refers to Earnings Per Share.

$$\text{EPS} = \text{Net income} / \text{No. of equity shares.}$$

P/E: It is Price to Earnings ratio. It is useful in determining whether a share is undervalued or overvalued. Lower P/E ratio indicates an attractive buy while high P/E indicates that a stock is overvalued.

P/E Band: It gives the high and low P/E range the stock witnessed in the past three years.

RONW: It means return on net worth. It is calculated by dividing PAT by Net worth. The higher the ratio, the more effective is the company in utilizing resources.

ROE : It means Return on Equity. It is a measure of how well a company uses reinvested earnings to generate additional earnings.

$$\text{ROE} = (\text{PAT} - \text{Preference Dividend} / \text{book value}) * 100$$

ROCE : It means Return on Capital Employed. It is a measure of the returns that a company is realizing from its capital.

$$\text{ROCE} = (\text{Net profit before interest and taxes} / \text{Total capital employed}) * 100$$

DPS : DPS means Dividend per share. It is the amount of dividend paid to the shareholders for each share held.

Dividend Yield : It is calculated by dividing the dividend per share by current market price. The higher the dividend yield, the more attractive it is for a potential investor.

D/E : It refers to debt to equity ratio. It is calculated by dividing the long-term debt by shareholders equity.

P/BV : It is price to book value ratio. It is calculated by dividing the current market price by the book value per share. Lower, the ratio more attractive it is to a potential investor.

Valuation : There are various models available for calculating the intrinsic value of the company. Let us discuss the *price to earnings ratio or multiplier approach*, which will help us in determining the long-term value of the stock.

$$\text{Earnings Multiplier} = \text{P/E ratio} = \frac{\text{Current Market Price}}{\text{Estimated earnings per share}}$$

The multiplier is primarily determined by the degree of risk of the firm and the rate of growth in its earnings. High multiplier is associated with high earnings growth. The P/E band in which the stock traded in the past and more weight can be given to the recent past to decide the boundaries. The boundaries indicate whether the stock is tending to sell at the upper limits of expectation or lower limits. Thus, target P/E is decided.

A target price is then calculated by multiplying target P/E with estimated earnings per share. This target price is then compared with the current market price to know the stock movement either it is upside or downside.

If Target price > Current market price, a **BUY** recommendation on stock.
(Undervalued stock)

If Target price < Current market price, a **SELL** recommendation on stock.
(Overvalued stock)

Let us take an example of Hindalco to understand company analysis.

Today's Price: Rs. 963.0

Target Price: Rs. 1299.1

*Highlights:***Scrip Details**

Market Cap Cr	8905.95	Hindalco Industries Limited, a flagship company of the Aditya Birla Group, with a turnover of Rs. 4,975 crore, ranks among India's top 10 companies in terms of market capitalisation. A non-ferrous metals powerhouse, Hindalco's operations are organised into two strategic business units — aluminium and copper. The company is an industry leader in both these businesses.
P/E Ratio FY04	10.6	
Dividend Yield FY04	1.7 %	
52Week Hi/Low	1503/614	
NSE Code	HINDALCO	

Shareholding %**(31.03.2004)**

Domestic Promoters	24.4
FII	36.4
Public	19.1
FI	20.1
Others	0.0

- **Operating Margins :** Company's operating margins were affected due to appreciating rupee and rising sea freight costs. Business however did a lot better due to rising aluminium prices.

- **Products:** The Company's product range includes primary aluminium ingots, billets, wire rods, rolled products, extrusions, foils and alloy wheels. Further, concentration on the high value-added products segments should help the company improve margins.

- **Global Demand :** Global demand for aluminium is expected to grow at around 6% led by China. There is also a demand recovery led by Japan and US. The domestic aluminium consumption is expected to grow by 7%, with strong demand from electrical, auto and construction sector. London Metal Exchange prices are also expected to be strong because of strong demand.

Performance: Top line of the company has grown by 24% in FY04, whereas the bottom line has shown a YoY improvement of 44% during the same period.

Valuations & Recommendations: Hindalco is currently trading at 10.6x FY04 earnings. We believe that it represents a good investment for medium to long run mainly due to company's prospects. A target price of 10x EPS FY05E is quoted with a 34.9% upside. A buy on the stock is recommended.

Financials (Rs Crs)	Net Sales	EBIDT	PBT	PAT	Equity	EPS (Rs.)	% chg. In EPS
FY03	4985.60	1245.10	899.40	582.10	92.5	63	-31.66
FY04	6190.90	1479.60	1245.60	838.90	92.5	91	44.11
FY05 (E)#						129.91	43.2

Data is collected from icidirect.com

HINDALCO	YE - March
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Size	Large Cap
Equity Rs Cr	92.5
Sales '04	6190.9
PAT '04	838.9
CMP Rs	963
52 week hi/low	1503\614
BV Rs #	741.6

Mkt Cap Rs Cr	8905.95
Mkt Cap/Sales '03	1.4
EV/EBIDT x '03 #	8.8
EV/EBIDT x 04 #	6.8

EPS '03 Rs	62.93
% Chg	-31.66%
EPS '04 Rs	90.69
% Chg	44.11%
EPS '05E	129.91
% Chg	43.2%
EPS av growth rate ('03-'05)	18.57

P/E '03	15.3
P/E '04	10.6
P/E '05E	7.4
P/E Band (last 5 yrs)***	22.72\5.10
Current Industry P/E	12.8
PEG based on '04 P/E	0.24
PEG based on '05 P/E	0.25

RoNW '03 #	9.4%
RoNW '04 #	
ROE '03 #	9.4%
ROE '04 #	

ROCE '03 #	6.8%
ROCE '04 #	

Div per share	16.5
Div Yield	1.7%

D/E	0.38
P/BV based on BV of '04	1.3

CMP Rs	963
Price target P/E	10
Price target for next 12 months	1299.1
% Upside/downside	34.9%

Therefore, the company can be analyzed from all aspects right from the structure of the company, its strategies against its competitors, past performance of the company to its expected future performance.

Thus, fundamental analysis explains and provides a proper reasoning whether to buy a stock or not to buy a stock. Another method of analyzing a stock is **Technical analysis**.

Technical analysis involves a study of market-generated data like prices and volumes to determine the future direction of price movement. It is mainly used to predict short-term price movements.

Findings :

The key differences between fundamental analysis and technical analysis are as follows:

- Fundamental analysis tries to establish long-term values, whereas, technical analysis mainly seeks to predict short-term price movements.
- The focus of fundamental analysis is on fundamental factors relating to the economy, the industry, and the firm. The focus of technical analysis is mainly on internal data, particularly price and volume data.
- Fundamental analysis appeals primarily to long-term investors, whereas technical analysis appeals mostly to short-term traders.

Conclusion :

Thus, fundamental analysis guides the investors in selecting a company, which is expected to perform well in a given industry under the present and future macro economic conditions. Unlike technical analysis which only depends on the past performance of stock prices and volumes and requires technical understanding. Fundamental analysis can be understood and followed by any type of investor. Therefore, fundamental analysis is a tool for better portfolio management.

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