Fundamental Analysis of Equity Stock: An Equity Research

Narendra Ningthoujam* and Sapna Chauhan**

ABSTRACT

Fundamental Analysis is a process of finding intrinsic value or worth of a share of a company by analysing various parameters like economics factor, industry or sector in which the company engages and company analysis including non-financial factors and financial factors. It is commonly used by investors for analysing long term investment. This study is done in attempt 1) to find out whether there is a relationship between financial ratios such P/E ratio, ROE, ROA, PB ratio and stock price, 2) to explain the popular methods of stock valuation, 3) to investigate reliability of Fundamental analysis in making investment decision. This study is an exploratory research design based on the secondary data. Financial data from top 480 companies listed on NSE and BSE are collected for this study. These data are mostly available in the website of NSE, BSE and some fintech companies. Data analytic tool like multiple regression are used in this study and hypotheses are framed to measure relationship between independent variables P/E ratio, ROE, ROA, PB ratio and dependent variable Stock price. The results of the study suggest that there is relationship P/E ratio, ROE, ROA, PB ratio and stock price. However, they don't have significant effect on stock price except ROA.

Keywords: *Fundamental analysis; P/E ratio; ROE; ROA; P/B ratio.*

1.0 Introduction

Fundamental Analysis is a process of finding intrinsic value or worth of a share of a company by analysing various parameters like economics factor, industry or sector in which the company engages and company analysis including non-financial factors and financial factors. Fundamental analysist tries to find stocks that are currently trading in the market at the higher or lower price than the real value. If the market price is greater than the intrinsic value, the stock is considered to be overvalued and it suggests that it is not right time to buy the stock. Likewise, stock is deemed to be undervalued if the market price is less than its intrinsic value and a buy recommendation is given. Fundamental analysis is knowledge of the rules and steps access to its objectives of determining the intrinsic value of shares in the stock markets, through a general framework to study the expected economic forecasts, leading to sectors which generate an increase in sales and profit, therefore measure strength financial companies, efficiency of management and business opportunities based historical financial statements and current conditions (Wafi, Hassan, & Mabrouk, 2015). Company Analysis consists of two parts (Roy, 2013):

1) Non-financial analysis: It includes analysis of leadership, top management, corporate governance, vision and mission of the company, corporate policies and relationship with various stakeholders and competitive advantages and disadvantages.

2) Financial Analysis: It means analysis of financial statements using the accounting ratios like P/E ratio, ROE, ROA etc.

There are different stock valuation methods such as Dividend Discounted Models (DDM), Discounted Cash flow models (DCFM), Residual Income Valuation Model (RI).

*Corresponding Author; Student, Department of FMS, PIMR, Parul University, Vadodara, Gujarat, India. (Email: nrdningthoujam@gmail.com)

**Asst. Professor, Department of FMS, PIMR, Parul University, Vadodara, Gujarat, India. (Email: sabrina.nishat@bup.edu.bd)

In short Fundamental Analysis is the technique that gives investors conviction to invest for a long term by helping in identifying the attributes of wealth creating companies.

1.1 Objectives of the study
- ➢ To examine whether there is a significant relationship between the profitability ratios (ROE&ROA) and stock price
- ➢ To examine whether there is a significant relationship between the valuation ratios (P/E ratio &P/B ratio) and stock price

2.0 Literature Review

The extensive literature of the study suggested that measures of relative value such as book to market ratios, P/E ratios, dividend yields and cash flow to price ratios predict future stock returns (Swapna & Subbalakshmi, 2020). The result of the study proved that ROA hasn't significant effect on the stock prices while EPS, P/E ratio and Debt to Equity ratio have positive association and significant effect on the stock prices. This study is beneficial to both International and domestic investors to predict the prices of stock in manufacturing companies by using fundamental factors like EPS, P/E ratio and DER (Luckieta, Amran, & Alamsyah, 2020). ROA affects stocks prices more positively after the publication of financial statements than before the publication of financial statements. This result indicates that the company management should improve its performance so that investors are interested to buy the stock and increase the price. The effect of NPM on the prices of stock is weak before the publication of financial statements than after the publication of statements (Tarmidi, Pramukty, & Akbar, 2020).

The analysis through the Vector Error Correction Model revealed that there is causality relationship between the macroeconomic factors like Index of Industrial Production (IIP), inflation, interest rates, gold prices, exchange rate, foreign institutional investment, money supply and BSE Sensex. The result of the study also suggested that BSE Sensex causes the changes in money supply, exchange rate, FII[1], gold prices and IIP[2] (Misra, 2018). The both Fundamental analysis and technical analysis can be used to generate positive return, but fundamental analysis is more preferable as it outperforms the technical analysis in the manufacture industry in Bursa Malaysia (Jakpar, Tinggi, Tak, & Yi, 2018)

The results from the investment strategy study indicate that fundamental analysis can be used to separate winner stocks from loser stocks. The usefulness of fundamental analysis opposes an efficient market in the semi-strong efficiency form. The strongest benefit for the investment strategy is found in small followed by medium sized companies (Bülow, 2017).

The model of the study suggested that valuation of a stocks should take into account of factors such as the conditions of industry, company, supply and demand of the products or services, domestic and global market, the productivity of achieved by the current financial activities, technology, and company's life, new product pricing, competitive status and risking taking of the company. The value of the stock increases if government spending, political system, institutional investors, financial health of managers, bonus share are announced (Sharafoddina & Emsiaa, 2016). The study revealed that only exchange rate, inflation and oil price have significant impact over the stock prices. The exchange rate and oil price have inversely related to stock price while oil prices are positively related to the stock price (Bhargava, Bhargava, & Jain, 2016). Fundamental analysis can't be applied in the Efficient Market Theory which states that if all information is known to the public and stocks price reflect that knowledge, then the stocks can be neither overvalued nor undervalued (Petrusheva & Jordanoski, 2016).

Distributions Discounted models (DDM) is found to be more useful than Discounted Cash Flow Models (DCFM) in developed financial market. When predicting the future stock value, DDM and Residual Income Model (RIM) proved to be more credible than DCFM. In the emerging financial market, RIM is the suitable model which rely on the historical data: the book value and earning per share (Wafi, Hassan, & Mabrouk, 2015).

The results of the empirical analysis revealed that the variables earning per share, book value per share, price earnings ratio size are significant determinants of share prices and investors should theses accounting ratios before making any investment decision (Almumani, 2014). The study revealed that the most important factors that influence investment decision of investors are reputation of the firm, status of the firm in the industry, expected earnings of the firm, profit conditions of financial statement, past performance of firm's stock, price per share, feeling on the economy and expected divided by the investors (Jagongo & Mutswenje, 2014).

Fundamental analysis is the process of determining the intrinsic worth or value of a share. It is analysing information that is fundamental to the certain company with aim of creating a portrait of the company, identifying the worth of it, buying or selling based on the information (Roy, 2013). Fundamental analysis examines the economic condition, industry performance, and company performance pertaining to the industry before making an investment decision. At company level, it involves study of financial data, management competency, business concept and competition. At industry level, supply and demand forces of products or services are examined. At the national economy level, it focuses on economic data to access present and future growth of the economy (A.S, 2013). The aim of the fundamental analysis is not only to find company that has successful business but also to find the worth of company is more than what investors estimate (Suzana, Sinisa, & Zoran, 2013). The results of the study indicated that book value, P/E ratio, EPS have positive association with the firm's stock price and dividend yield have negative association with the market price of the stock (Tandon, 2013).

The findings of the study suggested that fundamental factors are the better indicators of profitable investment (Hou, Karolyi, & Kho, 2011). Both groups of investors professional and non-professional use fundamental tools more than technical tools when they make investment decisions i.e., buy or sell of stocks. The result also indicate that fundamental analysis is relatively suitable for the long-term investment horizon and technical is needed for the short-term investment preferences (Cohen, Kudryavtsev, & Hon-Snir, 2011).

3.0 Research Methodology

The study is based on descriptive research design. The objects or data used in the study is secondary data. These data comprise of financial information of top 480 companies listed on the NSE and BSE exchange. Data are collected as on 30th June 2021.
Research Design: Descriptive Research
Data type: Secondary data
Data sources: Data are collected from fintech companies' websites Tickertape, Money control, Trading view, NSE and BSE website.
Sample size: 480
Analytic tool: Multiple Regression

3.1 Data analysis techniques and hypothesis.
Data analysis tool used in this study is Linear Regression which takes variables X_1 (P/E ratio), X_2 (ROA), X_3 (Return on Equity), X_4 (P/B ratio) and stock price Y. The study tries to establish whether is a significant relationship between P/E ratio, ROA, ROE, P/B ratio and stock price.

H0: there is no significant relationship between X_1, X_2, X_3, X_4 and stock price.

H1: P/E ratio effects on stock price

H2: ROA effects on stock price

H3: ROE effects on stock price

H4: P/B ratio effects on stock price

Independent variables: X_1 (P/E ratio), X_2 (ROA), X_3 (Return on Equity) and X_4 (P/B ratio)

Dependent variable: stock price

4.0 Results and Data Interpretation

Multiple Regression analysis is carried out by using excel and result of the test is given as follow:

Table 1: Regression Statistics

Multiple R	0.169733745
R Square	0.028809544
Adjusted R Square	0.020579117
Standard Error	5010.185146
Observations	477

Table 2: ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	4	351464553.1	87866138.28	3.500370293	0.007868313
Residual	472	11848122853	25101955.2		
Total	476	12199587406			

Table 3

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	1236.469	289.998	4.264	0.000	666.623	1806.315
PE Ratio	1.316	1.651	0.797	0.426	-1.928	4.560
Return on Equity	1.820	10.342	0.176	0.860	-18.502	22.141
Return on Assets	63.152	32.338	1.953	0.050	-0.392	126.696
P/B Ratio	12.256	14.341	0.855	0.393	-15.924	40.436

We can establish the multiple regression equation based the data given in the table 3 as follow:

Stock price = 1236.468587 + 1.315984706 P/E ratio + 1.819841079 ROE + 63.15155895 ROA + 12.25592018 P/B ratio.

4.1 Coefficient of determination

From the results of regression analysis, we find that the value of Adjusted R square is merely 0.020579117 which means that there is relationship between P/E ratio, ROA, ROE, P/B ratio and stock price. Hence, we can reject Null hypothesis. However, they are not strong predictors. The stock price is influenced by P/E ratio, ROA, ROE, P/B ratio only 2%, 98% of stock price is influenced by other factors. We can conclude that overall, the model is the significant.

4.2 Hypothesis testing

The effects of P/E ratio on stock price

P/E ratio tell us how expensive a specific stock is. Higher P/E ratio means stock is priced relatively high. It is observed that P/E ratio have positive relationship with stock price but the relationship is not significant as P value has greater than value of 0.05, the value of α. It is concluded that P/E ratio doesn't have significant effect on the stock price. Hence H1 is rejected.

The effects of ROA on stock price

Positive ROA shows that the company is able to generate profit using total assets and Negative ROA means the company is not able use capital employed to earn profit. It is seen in the table 3 that ROA has positive relationship with stock price and it has significant effect on the stock price as P value shown in the table 3 is equal to the value of α. Hence H2 is accepted.

The effects of ROE on stock price

ROE measures the company's ability to generate profits from the shareholder's investments. In other words, ROE shows the efficiency of the company in terms of generating profits to its shareholders. The higher the ROE, the better it is for the shareholders. The result of test shows that ROE is slightly positive relationship with stock price but it is not significant because P value is greater than value of α =0.05. Hence H3 is rejected.

The effects of P/B ratio on stock price

The "Book Value" of a firm is simply the amount of money left for the equity investors after the company pays off its obligations. In other word it is the amount left after deducting total liabilities from the total assets. A high P/B ratio could indicate that the firm is overvalued relative to the company's equity/ book value. A low P/B ratio could indicate the company is undervalued relative to the equity/ book value. P/B ratio is not significantly related to stock price. Hence H4 is rejected.

5.0 Summary and Conclusion

5.1 The results of the study
- Through the data analysis using Multiple Regression tool, it is found that there is a relationship between P/E ratio, ROA, ROE, P/B ratio and stock price. However, the value of R square given in the table 2 is weak and they are not strong predictors of stock price.
- The study finds that there is positive association between P/E ratio, ROA, ROE, P/B ratio and stock price. But they don't have significant effect on the stock price except ROA.

5.2 Recommendation

Suggestion or recommendation that I want to give for future study is that it is better to analyses financial data of the companies in the same sector. I have selected top 480 company listed on NSE and BSE for this study. These companies are engaged in different industry or sector and the companies in different sector have different parameters or different financial ratios. These differences have impact on the result regression test.

5.3 Conclusion

Fundamental analysis is a technique of determining intrinsic or fair value of a share by considering various factors which are potential effect the stock. These factors are economic, industrial, financial and non-financial factors. It is a reliable technique used for the analysis of the

stock. There are two approaches in this technique i.e., top to bottom approach and bottom to top approach. The valuation methods or model used in fundamental analysis include Dividend Discounted model, Discount free cash model and Residual Income model etc. The results of study reveal that there is a relationship between P/E ratio, ROA, ROE, P/B ratio and stock price. ROA has significant effect on the stock price. The results also indicate that fundamental analysis is a reliable technique used for making long investment decision.

Endnotes

1. Foreign Institutional Investment
2. Index of Industrial Production

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