CHAPTER VI

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6.0 Introduction

The stock market plays a crucial role in the progress of the commerce and industry of the country that in due course affects the country’s economy to a great extent. From both industry’s and investor’s point of view, the stock market is imperative. Hence the stock market is renowned as an indicator of economic growth of a country. Bombay Stock Exchange in India being one of the fastest stock exchange in Asia, is a key financial organization and plays a very vibrant role in increasing investment.

It is the basic concern of the research project to analyze the factors of stock market which might influence the investor to invest in the equity share prices. Investment in equity share is one of the most liquid forms of investment. The market price of the share is one of the most important factors, which affects the investment decision of investors. The market price of the share depends on many other factors, such as earnings, dividend, payout ratio, size of the firm and dividend yield, management, diversification, etc.

Against this background, an attempt has been made in this study to find out the important determining factors, which influence equity share price and also to study the extent of their functional relationship with the market price.

From the review of earlier studies, it is observed that many research studies have been conducted in this area but they have not provided sound theoretical and empirical analysis as to why securities sell at certain prices. Most of these studies were
based on the small sample with a limited number of variables and analyzed without comparing their relative performances. The present study is an improvement over the earlier studies, as it employs a good number of sample and examines more number of variables than those included in earlier studies.

Thus, the main aim of this study is to measure the relationship between stock prices and company specific intrinsic factors during the period of 2003-04 to 2012-13. More specifically, the study aimed at to examine the relationship between equity share prices and explanatory variables; analyze the relationship between the equity share prices and select financial variables; to evaluate the impact of select non-financial determinants on market price and earnings of the shares in the sample industrial companies. Further, it suggest the measures for the better investment decisions of the stakeholders. Based on these objectives, several hypotheses are framed and tested based on the selected statistical techniques.

6.1 Research Design

Based on the objectives of the study, a descriptive research has been adopted. Descriptive is one, which largely used to draw inferences about the possible relationship between variables. It is the simplest type of research. It is designed to gather descriptive information and provide information for formulating more sophisticated studies. It involves formulation of more specific hypotheses and testing them through statistical inference.
6.2 Selection of Sample:

It is a known fact that the industries which are related to the food, clothing and shelter are core industries of any economy. Agriculture based industries, mining, steel, cement, etc. are said to be the core industry. Irrespective of the fluctuations in economy, these industries maintain their consistency. Hence, in the aspect of food and clothing, agrochemical industry has been considered for the present study. Under the aspect of shelter, steel and cement industries have been considered for the study. Hotels being a new contributor to the economy in service sector, it has also been selected for the study. The companies with continuous data for ten years in the respective aforesaid industries and which are listed in the Bombay stock exchange only have been chosen for the study.

While selecting the companies, four industries are chosen as said above with the justification of based on their importance in producing the goods, which are basic necessaries for the people, i.e., food, shelter and clothing. The agrochemical and hotel industries are the food and clothing based and steel and cement are the basis for providing shelter to the people. Further, in selecting these industries and in the second level companies in each industry the convenience sampling is followed. As the name indicates, in convenience sampling, sample elements are selected based on the convenience of the researcher.

Selection of sampling has been done in three stages by using multi-stage sampling method. Firstly, top performing listed companies with respect to market capitalization in the Bombay Stock Exchange are identified from different sectors. Secondly, four industries
namely Agri-chemicals, Cement, Hotel and Steel industries are selected. Thirdly, while selecting sample of companies from selected four industries a company has been regarded as eligible for selecting as a sample if it satisfies that it should be: a listed one in Bombay Stock Exchange, the necessary data for calculating the dependent and independent variables pertaining to the period of study should be available.

The objectives of the study have been studied through the use of secondary data. Data have been gathered from various sources, viz., CMIE Prowess, BSE annual reports, SEBI annual reports, financial newspapers and financial journals. The financial tools and statistical techniques used in the present study are used to analyze the impact of the both the financial and non-financial variables on the stock market prices and also the earnings of the stocks during the period of study. The analysis and interpretation of financial statements are used to determine the financial position and results of operations as well. A number of techniques or devices are used to study the relationships between different items in financial statements. An effort is made to use those devices, which clearly analyze the performance of the business enterprise.

6.3 Statistical Techniques:

The market price of share has been taken as the dependent variable while other factors have been taken as explanatory or independent variables. The analysis has been employed to study the effect keeping in view that this method has certain advantages which are not available in any other multivariate discriminate analysis. To avoid the problem of
multi-co-linearity, backward elimination procedure of regression has been used. Two regression equations are developed to test the first and second objectives.

Mathematically the equations are as follows:-

**Equation 1 --->**

**Regression Model:** \[ MPS = a_0 + b_1 \ BV + b_2 \ SIZE + b_3 \ RONW + e_1 \]

**Equation 2 --->**

**Regression Model:** \[ MPS = a_0 + b_4 \ DPS + b_5 \ EPS + b_6 \ DY + b_7 \ DP + b_8 \ P/E + e_2 \]

The statistical significance of regression coefficients have been worked out and tested with the help of t test. The coefficient of determination is computed to determine the percentage variation in the dependent variables explained by independent variables. Also adjusted R Square and change statistic values are measured. The ‘F’ values are also computed to test the significance of ‘R’ square with ‘F’ distribution at one, five and ten percent level of significances.

**6.4 Organization of the Study:**

The present study is classified into five chapters. The first one is an introductory one deals with nature and relative importance of stock markets, trading procedure of stock markets and presents the comprehensive theoretical review including variables which are taken as the determinants of the study. The second one deals with procedural approach engaged in this study. Chapter Three presents the profile of select industrial companies as to understand the working results of the study. The analysis on the descriptive statistics of the calculated determinants, regression and correlation results of various determinants
of equity shares is arranged in chapter four. Chapter five arranged the analysis on the third objective with the help of regression and correlation analysis of non-financial determinants of the stock prices, comparative analysis and findings deduced from the calculations. The last one deals with the main conclusions and discuss some of their possible implications for the financing policy.

6.5 Findings on the Impact of Financial Variables:

It can be observed that amid the nine variables, in case of Aditya Birla Chemicals Ltd, a huge disparity in the data set of MPS, BV and P/E are found during the study period because of the fluctuations realized in the selected variables. Except DY and RONW the average growth is consistent. On whole, it can be concluded that due to the higher book value when compared to the market value of the share, the market is giving investors the prospect to buy a business for less than it’s specified net worth.

The outcomes construed from the data of Atul Ltd surmises that the variables like DPS, SIZE, DY and RONW have low standard deviation values which are consistent and touching close by the mean under. Having higher book value than MPS means that the financial market values the company Atul Ltd for a smaller amount than its stated value or net worth.

The analysis of Dhanuka Agrochemical Ltd shows a greater discrepancy in the data set of MPS, EPS and BV which is because of the fluctuations in the select variables during the study period. Hence the higher market price than book value with higher
earnings indicates that the market assigns a higher value to the company due to the earnings power of the company's assets.

In case of Excel Industries Ltd, DPS, EPS, BV, SIZE, DY and RONW have low standard deviation values with a consistent data set that is affecting close to the mean. Because of the higher book value, it can be concluded that the demand of the share is found to be low during the study period.

For Rallis India Ltd, there is a greater variation in MPS, EPS, BV, DP and RONW during the period of study. The average growth was steady except for EPS, RONW and P/E since they are found to de-grow. Hence it can be inferred that the dividends were paid according to the increase in earnings but more earnings than dividends indicates that the company is accumulating for future purposes and also is a better source of mobilizing the money.

Out of the five companies that are selected under Agri Chemicals industry, Rallis India Ltd has a maximum average market price of share followed by Dhanuka Agrochemical Ltd, Excel Industries Ltd, Atul Ltd and Aditya Birla Chemicals Ltd. The Maximum Dividend to the shareholders is also paid by the Rallis India Ltd during the study period. Low DPS is paid by the Aditya Birla Chemicals Ltd. Under EPS, Rallis India Ltd is having maximum and Excel Industries Ltd attained last position. The average Book Value of the share is found to be maximum for Rallis India Ltd. The Net Sales of the Rallis India Ltd were increasing year after year throughout the study period. Hence, under the Size of the firm also Rallis India Ltd can be placed first. Under the variable RONW, which
decides the wealth of the shareholders Dhanuka Agrochemical Ltd had the top position. Under this performance, Rallis India Ltd stood at fourth place followed by Excel Industries Ltd. Therefore it can be concluded that Rallis India has a higher market price compared to others, which may be because of steady dividend policy and performance of the company.

In case of Grasim Industries Ltd, the variables, like MPS, EPS, and BV have greater variation in the data set because of more fluctuations on the above said variables during the study period. There is a good record of market share of the price and earnings per share which is a sign of profitability. Hence it can be inferred that out of 20 companies, Grasim Industries Ltd is producing more profit for its shareholders which in turn resulted in higher demand for the share in the market leading to the higher market price.

After examining the data of OCL India Ltd, a greater variation in the data set of MPS, EPS and BV were found because of the more fluctuations. There is a good record of earnings per share of the company. Except RONW, all the other variables are observed to have a steady growth. Hence it can be seen that the market allocates a higher value to the company due to the earning power of the company's assets.

For Prism Ltd. the remaining variables like DPS, SIZE, DY, DP, RONW and P/E have low standard deviation values which shows consistency of data set and values near to the mean. Both market price and EPS are observed to have a good record. The average growth of all variables is progressive and stable which gives an inference that the company is generating good profits to the shareholders.
The outcome of the calculations for Ramco Cements Ltd shows that there is a greater variation in the data set of MPS, EPS, BV, DPS, RONW and P/E for the reason that fluctuations that transpired on the above said variables during the study period. Dividend per share has a better record than EPS resulting the lesser growth rate in EPS, DPS, RONW and P/E. With higher dividends paid to the shareholders, the firm is not in a position to reinvest enough funds back and thus it results in lower growth rate.

For Sagar Cements Ltd, the variables like DPS, SIZE, DY and P/E display consistency of data set and values close to the mean. Except DP, DY and RONW the growth rate of selected variables is steady. Both market price of the share and earnings per share have a good record concluding that market assigns higher value and earnings per share more than dividend per share shows the profitability.

From the analysis, it is evident that the Grasim Industries Ltd has higher average market price of share followed by Prism Ltd, Ramco Cements Ltd, OCL India Ltd and Sagar Cements Ltd. The Maximum Dividend to the shareholders is also paid by the Grasim Industries Ltd during the study period. Low DPS is paid by the Sagar Cements Ltd. Under EPS, average book value, size of the firm and RONW, which decides the wealth of the shareholders also Grasim Industries Ltd has a maximum record. Last place is attained by Ramco Cements Ltd. On the whole, it can be seen that Grasim Industries Ltd is having good performance in all the variables during the study period.

After evaluating the performance of selected variables under ElH Ltd, a better variation in the data set of MPS, EPS, BV, DP and P/E was found because of the greater
fluctuations in the above said variables during the study period. It can be summarized from the data that the average growth rate of both market price and earnings per share decrease and all other variables are steady. Also, due to the higher market value of the share than the book value investors are more interested to invest their savings in this company and also the risk of the shareholders is less.

The results from the data of Gujarat Hotels Ltd, shows that of all variables, there is a vast variation in the data set of only one variable i.e., MPS was found because of the fluctuations that ensued during the study period. Except DP and DY, all the other variables are observed to have a stable average growth. Hence it can be concluded that in spite of low earnings, market value of the share is high, which may be because of the dividend policy and the reputation of the company.

In case of Hotel Leela Venture Ltd, there is a massive variation in the data set of MPS, BV and P/E because of the rise and fall that happened on the above said variables during the study period. It can be inferred that since the dividends paid were very low, high projected earnings in the future can be expected.

In case of Indian Hotels Company Ltd., the variables like DPS, SIZE, DY, RONW and P/E demonstrates the consistency of data set and values close to the mean. In spite of having a higher MPS than book value, earnings and dividend per share are observed to be very low. Also, the average growth rate of MPS, BV, DPS and DP are negative. Hence it can be concluded that the dividends accessible to the shareholders is very low because the earnings per share has registered a low figure.
For Oriental Hotels Ltd, the remaining variables, like MPS, EPS, BV, DP and P/E have enormous disparity in the data set because of the vacillations that occurred on the above said variables during the study period. Dividend payout ratio is observed to have good record which concludes that the company is paying higher dividends which usually happens in mature industries where there is little possibility for growth and paying higher dividends is the best use of profits.

It is apparent from the analysis on the Oriental Hotels Ltd, out of the 5 select companies, it has paid maximum dividend to the shareholders during the study period. Congruently maximum average book value was registered by Indian Hotels Company Ltd. The Net Sales which is a measure of the Size of the firm is maximum for Indian Hotels Company Ltd. Moreover, when it comes to the variable RONW, which decides the wealth of the shareholders, Gujarat Hotels Ltd has scored maximum. On the whole, it can be concluded that in respect of the performance of all the variables Hotel Leela Venture Ltd comes last.

The variation is found to be huge in the data set of MPS, BV and P/E for Facor Steel Ltd because of the fluctuations that have taken place on the selected variables during the study period. EPS, DPS, DP and RONW which are contributing factors for profitability are observed to have a negative average growth rate. Hence it can be concluded that there is much demand for the respective share in the market.

The data interpreted for JSW Steel Ltd, we can observe a greater variation in the data set of MPS, BV, DP and P/E as up and down effects of the select variables during the
study period. The higher P/E record shows that investors are expecting higher earnings in the future which in turn resulted in higher market price of the share.

In case of Rathi Steel and Power Ltd, the variables like MPS, EPS, BV, DP and P/E have more distinction in the data set because of the effect of fluctuations in the variables taken for the study. With higher book value and lower earnings of the company, it can be concluded that the financial market values the company for less than its specified value or net worth.

While considering the performance of selected variables in case of Steel Authority of India Ltd, it is noticed that a vast variation in the data set of MPS, BV, RONW and P/E was discovered as a result of fluctuations. A low P/E ratio can be observed from which we can conclude that investors presume very little or zero growth in a company’s earnings in the future.

The variables, viz., DPS, SIZE, DY, DP and P/E have low standard deviation values, which shows consistency of data set and moving very close to the mean in case of Tata steel Ltd. except DP and RONW, the other variables are having a positive average growth rate. The MPS is also having more record than book value indicating the demand for the share in the market.

From the elucidations and investigation steered for the Steel industry, it is apparent that the Tata steel Ltd, out of 5 companies, has paid maximum dividend to the shareholders during the study period. In the same way maximum average book value was registered by
Tata steel Ltd. Furthermore, when it comes to the variable RONW, which decides the wealth of the shareholders, Steel Authority of India Ltd has scored maximum. On the whole, in respect of performance of all the variables Rathi Steel and Power Ltd was standing at last.

The results of Pearson's correlation test revealed significant and strong correlation between market price of share (MPS) and BV, DPS, EPS, SIZE and RONW. All the variables had strong positive correlation with Market prices apart from the DY, which had strong negative correlation with stock prices. The remaining variables like P/E and DP is having insignificant relationship with Market Price of the share.

The selected determinants are analyzed to find out the relationship with the market price of the share by using multiple regression analysis. This research found a significant linear relationship among market price of the share (MPS) and BV, DPS, DY, EPS and RONW and it is also found that insignificant and non-linear relationship exists among the MPS and DP, P/E.

Out of the eight variables that are selected for determining the stock price of select companies, except DP and P/E variables, the remaining variables are having significant relationship with market price of share. It means the six variables BV, DPS, DY, EPS, SIZE and RONW are determining the movement of stock prices of select companies.

The comparative analysis of average mean of MPS and BV of all companies revealed that Grasim industries Ltd is having maximum of average MPS and BV. Rathi
steel and Power Ltd have minimum average MPS and Gujarat Hotels Ltd has minimum average Book value. The cement industry has a good performance out of all selected industries.

The results of comparative analysis of average mean of EPS and DPS shows that Grasim Industries Ltd is having maximum average of EPS and DPS. Ramco Cements has a minimum average EPS whereas Hotel Leela Ventures Ltd is having minimum average DPS. In case of EPS also, the cement industry has a higher record than others.

From the analysis of the comparison of average mean of DP, DY, RONW and P/E, it can be observed that EIH Ltd has a maximum average DP, where Oriental Hotels Ltd was having a minimum average DP. Atul Ltd, out of all companies is having a maximum average DY and Hotel Leela Ventures Ltd has minimum of average DY. Dhanuka Agrochemical Ltd has a maximum average RONW and minimum of average P/E during the period of study.

The results attained from the comparative analysis of average growth rate of MPS and BV of all companies reveal that Rathi Steel and Power Ltd is having a maximum of average growth rate of MPS and at the same time EIH Ltd has minimum. On the other hand, Ramco Cements Ltd is having a maximum BV whereas Oriental Hotels Ltd is observed to have a minimum BV during the study period indicating that hotel industry stands last when compared to other select industries.

The data from the calculations on comparative analysis of average growth rate of EPS and DPS shows that the Excel Industries Ltd is having a maximum average growth
rate of EPS whereas Ramco cements Ltd is observed to have minimum. Consequently, for DPS, Dhanuka Agrochemical Ltd is having a maximum average growth rate However, out of 20 companies, Rath steel and power Ltd seems to have minimum during the period of study.

From the comparative analysis on average growth rate of DP, DY, RONW and P/E, it can be observed that Aditya Birla Chemicals Ltd has a maximum average growth rate of DP, where Ramco cements Ltd is having minimum. Facor Steel Ltd, out of all companies is having a maximum average growth rate of DY and Rath Steel and Power Ltd has minimum. Excel Industries Ltd has a maximum average growth rate of RONW whereas Ramco Cements Ltd is seen to have a minimum growth rate. During the period of study, it can also be observed that Atul Ltd is having maximum average growth rate of P/E whereas Sagar Cements Ltd has minimum.

**6.6 Findings on the Impact of Non-Financial Variables:**

Agrochemical industry, which is a major contributor to the economy, the regression results of independent and dependent variables reveal that the gross domestic product and exchange rate are having a significant relationship with market price of the share where exchange rate witnesses the inverse relationship.

The findings from the regression results of independent and dependent variable of cement industry show that only the gross domestic product is having significant relationship with market price of the share. Though the exchange rate is having inverse relationship, it is statistically insignificant. Hence, in case of cement industry only GDP
has an impact on MPS of the select companies which may be because it has a reasonable contribution to the economy and demand for the industry.

In case of hotel industry, the results of the regression analysis on independent and dependent variables show that both the gross domestic product and exchange rate are not having any significant relationship with market price of the share. Hence, for the select companies of hotel industry, the market price of the share is not influenced by GDP and ER.

The inferences of the regression results of independent and dependent variable of steel industry indicate that there is no impact of GDP and ER on market price of the share. Further, there is a negative relationship of GDP with MPS yet statistically insignificant.

It can be summarized that the market price of the share of Agrochemical industry is influenced by GDP and exchange rate, while MPS of cement industry has only an impact of GDP. On the other hand, MPS of hotel industry and steel industry has no influence of GDP and ER.

Further, the regression results of independent and dependent variables of the companies in Agrochemical industry reveal that the gross domestic product has a significant relationship between the earnings per share In spite of having inverse relationship of ER with EPS, it is statistically insignificant.
From the regression results of independent and dependent variable of cement industry it can be concluded that the GDP is having significant relationship with earnings per share but exchange rate is insignificant by showing no impact on EPS.

The results of the regression analysis of independent and dependent variables of hotel and steel industry indicate that both the GDP and exchange rates are not having any significant relationship with earnings per share. Further, there is a negative relationship of the GDP with EPS which is statistically insignificant. This may be because of the demand for the industry.

The results of regression analysis of independent and dependent variables of the companies showed that the gross domestic product has a significant relationship with earnings per share. On the other hand, the exchange rate has an inverse relationship with EPS, which is statistically insignificant.

6.7 Suggestions:

The following suggestions are offered on the findings of the analysis on the price determinants of the select companies listed in Bombay stock exchange during the period of study:

(i) It is observed from the analysis that the dividend per share is having a significant relationship with market price of the share. Hence, it is suggested that the company pay the dividends regularly, which attracts the investors to investment their savings in such types of companies.
(ii) The earnings per share and the book value per share of a the select companies are also causing effect on the market value of the share, which suggests that the company must earn profit after tax that helps to maximize the company’s earnings and the book value.

(iii) Every company must concentrate on dividend yield, which helps to get high returns and capital appreciation in the form of market price per share.

(iv) Since the size of firm in terms of sales and PÆ ratio of the company cannot influence the market price of the share along with maximization of sales, there is need to pay more dividends to shareholders need to be concentrated.

(v) The companies should maximize their net profits, which would help to improve the dividend yield and dividend payout of the company on market price per share.

(vi) The return on net worth, which is showing less impact on the market price per share suggests that increase in return on net worth may have a chance of increase in market price of the share.

(v) The results revealed in the present study supports a liberal dividend policy and suggests that companies pay regular dividends. This policy will affect the market price of shares in a positive direction.

(vi) Since, book value per share depicts the owners' funds, a higher book value per share is perhaps perceived by an investor to be an indicator of the sound financial position of a company for investing. All results show that the study of financial factors prove to be beneficial for the investor in the India.
(vii) Since the Agrochemical industry has a significant relationship with GDP and ER, it is suggested that to incorporate more advanced methods and sound policies by the government in order to increase and maintain the demand.

(viii) The hotel industry being a budding but a challenging one has no major effects of GDP and ER, hence effective and encouraging policies by the government would drive and increase the demand of the shares.

6.8 Scope for Further Research

As the number of companies’ chosen from the select industries is limited, the model explained the variance, hence leaving scope for further research to identify those variables that influence the market price of the share. The research studies may be extended to other industries, which are involved actively in stock markets. Present study has taken only few core industries as the study has left out some other major industries. Across industry analysis could also be carried out to study, if there are any influential factors that determine the market price of equity shares, which could help both investors and companies in making profits.