OBJECTIVES AND METHODOLOGY OF THE STUDY
CHAPTER II

OBJECTIVES AND METHODOLOGY OF THE STUDY

This chapter provides an overview of previous research on stock markets and share price determinants influencing the markets. It also presents the framework of the present study, which embraces the main emphasis of the present research described in this thesis. It is essential to set the perspective of the literature review work by first providing:

- An explanation of the specific purpose for this particular study;
- Comments on the previous research works on stock markets, share price determinants and variables influencing them;
- An indication of scope of the work presented in this chapter.

Also the present chapter discusses the need for the study, the specific objectives of the study, sample selection and methodology undertaken for the study.

2.1 Need of the Study

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 and investor 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 necessary to analyze the basic
factors of stock market which might influence the investor to invest in the equity share prices. As a matter of fact, investment in equity share is one of the most liquid forms of investment. The market price of the share (MPS) is one of the most important factors, which affects the investment decision of investors. The MPS depends upon many other factors, such as earnings per share, dividend per share, dividend payout ratio, size of the firm and dividend yield, management, diversification, etc. For predicting share prices, there are different approaches. Amongst them the fundamental approach predicts the share price on the basis of economic, industrial and financial factors, and technical approach takes the help of past trends in predicting future share price.

The current study deals with fundamental analysis of share valuation as it focuses on factors relating to the company. In developed countries many studies have been undertaken to study the determinants of the share price but in India there are few studies which have been conducted on this concept. So in the present study an attempt has been made to find out some important determining factors which directly influence equity share price (market price) of listed companies in the Bombay Stock Exchange in India and study the extent of their functional relationship with the market price.

2.2 Review of Literature

A good number of empirical studies have been conducted to find out the determinants of stock prices in different countries. Several researchers examined the relationships between stock prices and some selected factors. The pioneering work on determinants of share prices by Collins (1957) used data from American banks and
concluded that share prices are influenced by Dividend per Share and Book Value per share. Following Collins, there have been various attempts to ascertain the determinants of stock prices for different markets.

The study steered by **Srivastava (1968)** about the effect of retained earnings on share prices revealed that the retained earnings have no vital influence on share prices.

**Patell (1976)** piloted a study on NYSE to examine the common stock price behavior accompanied by voluntary disclosure of corporate forecasts of Earnings per share. The result of this study indicates that disclosures of forecasts of earnings per share go along with significant price adjustments.

**Bhole (1980)** in his study concluded that earnings is a significant factor influencing the share prices.

**Pandey (1981)** examined the impact of leverage on equity prices and concluded that Modigliani hypothesis is not supported in India. However, the risk proxy used in the study, namely, coefficient of variation of net operating income is highly questionable.

**Zahir and Khanna (1982)** studied the determinants of stock prices in India in 101 industrial giants in the private sector for the year 1976-77 and 1977-78 with the help of multiple linear regression models. They concluded that dividend per share emerged as a significant determinant of share price, whereas yield also emerged as highly significant determinant with its negative association with market price of share. The influence of earning-price multiplier on share prices appeared to be very weak.
The above mentioned discussed studies have been conducted for the foreign markets. Specifically, in the Indian market, a number of studies were undertaken that have attempted to identify the factors that influence the share prices.

**Zahir and Khanna (1982)** made an attempt in their study and found that dividend and yield are two factors which are considerably influencing the share price.

**Bal Krishnan (1984)** analyzed the interrelationship among the explanatory variables, i.e. dividend per share, earning per share, book value, yield and market price of share in general engineering and cotton textile industries. Linear regression model was used in this study to elucidate the inter-relationship of these variables and concluded earning per share as the most influential factor. The book value per share and dividend per share and yield with a negative sign turned out to be the most significant determinants of market price in both the industries.

**Krishnan (1984)** examined the share prices of general engineering industry and cotton textiles industry and the study revealed that book value per share and dividend are significant factors that determine share prices. In the case of cotton textiles industry, yield was also detected to be pointedly influencing share prices.

**Srivastava (1984)** did cross-section study of 327 companies and concluded that high dividend rates are associated with higher market prices of securities. Therefore, his study specified that the famous Modigliani – Miller model stating dividends had no impact on share prices was not applicable in the Indian context.
Kumar and Hundal (1986) examined the impact of dividend per share, earning per share, net sales per share, and book value per share, net worth, retention ratio, leverage ratio and growth in total assets on market price of share by using the linear regression model. The analysis presented the sensitiveness of the market towards the dividend policy of the three groups and growth exhibited a positive influence only in case of textile industry, where leverage in general had a negative influence on the share prices.

Chawla and Srinivasan (1987) scrutinized the relation between share prices, dividend and retained earnings for the chemical industry. According to the study, both Dividend and retained earnings were realized to be significant determinants of share price.

Campell and Shiller (1988) analyzed the interrelationship among the explanatory variables in general engineering and cotton textile industries with the help of linear regression model and found earnings-to-price ratios contribute significantly to the explanation of long-term stock price variation.

Karathanassis and Philippas (1988) conducted a study on banks listed on Athens stock exchange and found Dividends, retained earnings and size indicated a significant positive influence on share prices.

Barua and Raghu Nathan (1990) used the Gordon’s dividend growth model to demonstrate the prevailing P/E multiples in the Indian capital market around the second and third quarter of 1990 which were on the higher side.
Rao and Bhole (1990) studied the real rates of return on equities in the Indian market for the period 1953-1987 and concluded that equities provide only a partial hedge against inflation.

Midani (1991) took a sample of 19 Kuwaiti companies and found earnings per share as a determinant of share prices in Kuwait.

Obaidullah (1991) observed that low P/E stocks have out-performed the high P/E stocks in Indian capital market.

Sharma and Singh (2006) used data from 160 Indian firms between the years 2001 and 2005 and found that earnings per share, price-earnings ratio, dividend per share, dividend coverage, dividend payout, book value per share, and firm size are the determinants of share prices.

Zahir’s (1992) study revealed that the prices of both more and less volatile shares are influenced by factors, viz., dividend, earnings and yield. Further, the study points out that security price index is a significant price determinant of more volatile shares.

Srinivasan (1993) studied the efficiency of the market in assimilating the information content of right issues and concluded that the market was largely efficient.

Sinha (1994) reasoned that the high P/E ratio observed in March 1992 was partly attributed to abnormally low earnings during 1991-92 and partly to the high P/E ratios of MNCs. Even after adjusting for these two factors, he found P/E ratio to be relatively high.
Vaidya Nathan and Goswami (1997) examined whether the price to earnings ratio (P/E) was a good criteria on which investment decisions are to be made. There was a general proposition that low P/E stocks on an average provide larger return than high P/E stocks. The test revealed that the average annual return of the portfolios formed on the bases of P/E ratio was not significantly different from each other. Hence, the P/E ratio may not be an appropriate measure to be used for investment decisions.

Mohanty (1998) in his study observed that as far as stock returns are concerned, the book-to-market and size of the company does not have explanatory power once the PE risk and the liquidity risk were adjusted.

Wayne and Campbell (1998) provided a global asset pricing perspective on the debate over the relation between predetermined attributes of common stocks, such as ratios of price-to-book value, cash-flow, earnings, and other variables to the future returns. The study presents an empirical framework for confronting the problem at a global level, assuming integrated markets with a new evidence on the relative importance of risk and mispricing effects. Using monthly data for 21 national equity markets it was grasped that the cross-sectional explanatory power of the lagged attributes is related to both risk and mispricing in the two-factor model, but the risk effects explains more of the variance than mispricing.

Tsoukalas and Sil (1999) investigated the impact of dividend/price ratio and dividend growth on the share prices movements of UK stock market from January 1995 to December 1996. They found that D/P ratio predicts real stock returns for the UK stock
market, and there was a strong relationship between real stock returns and Dividend yields.

Malhotra and Prakash (2001) brought out analysis of the market price determinants of ‘A’ group and ‘B’ group shares during 1989-90 to 1998-99 using correlation and regression analysis as the tools. The study concludes that the price behavior of 'B' group share is determined mainly by factors like book value per share, earnings per share, dividend per share, P/E ratio and market price to book value ratio. Interestingly, the price of a group shares is determined by the same factors except P/E ratio which was found noteworthy only in case of four years out of ten years.

Irfan and Nishat (2002) attempted to explain the price changes due to the six fundamental variables (dividend yield, payout ratio, size of the firm, leverage, earnings volatility and asset growth) during the period 1981-2000 in Pakistan. They have used simple regression model to observe the price changes and the empirical findings revealed that that prime key fundamental factors had no significant influence on the share price deviation in Pakistan.

Malakar and Gupta (2002) in an attempt to identify the share price determinants for the cement industry found dividend to be a significant determinant of share price.

Pradhan (2003) for a sample of Nepalese firms, revealed that it was dividend which significantly influences share prices.

Sen and Ray (2003) examined the key determinants of stock price in India and the
study is based upon the stocks comprising the BSE index over a period 1988-2000. The empirical study revealed dividend payout was an important factor influencing stock prices. Further, they found earning per share has a very weak impact on the share prices. This study explored one of the crucial factors as dividend payout ratios is having impact on Indian stock price.

Hartono (2004) examined the impact of dividend and earnings on stock prices and found significant positive impact on equity prices when positive earnings information occurs after negative dividend information. Also, a significantly negative impact occurs in equity pricing if positive dividend information is followed by negative earning information.

Al-Deehani (2005) examined the determinants of share price for companies listed on the Kuwait stock exchange. The empirical findings displayed that variables like previous earnings per share, cash dividends per share, previous cash dividends per share, return on equity, and price to book value ratio, previous cash flow per share and cash flow per share are all highly correlated with the share price.

Docking and Koch (2005) found direct relationship between dividend announcement and equity price behavior.

Mehta and Turan (2005) identified market capitalization, market price to book value ratio and P/E ratio as major factors influencing share prices.

Nathan Taulbee (2005) measured the influences of macroeconomic indicator on the stock market in SandP 500. The result was the GDP have a significant correlation with
the stock price where unemployment and inflation have no significant correlation with the stock price.

Amidu and Abor (2006) used OLS Regression Model in Ghana and identified a key relationship between dividends and earning that could directly influence the movement of share prices.

Sharma and Singh (2006) used data from 160 Indian firms between 2001 and 2005 and found that EPS, P/E ratio, dividend per share, dividend coverage, dividend payout, book value per share, and firm size are the determinants of share prices.

Singhania (2006) for manufacturing firms conveyed book value, dividend, dividend cover, dividend yield, earnings and price-earnings ratio as significant share price determinants.

Al–Tamimi (2007) in his study on UAE market identified company’s fundamental factors (performance of the company, a change in board of directors, appointment of new management, and the creation of new assets, dividends, earnings), and external factors (government rules and regulations, inflation, and other economic conditions, investor behavior, market conditions, money supply, competition, uncontrolled natural or environmental circumstances) as influencers of stock prices. This study is based on a simple regression model to measure the coefficients of correlation between the independent and dependent variables, viz., SP: stock price; EPS: earnings per share; DPS: dividend per share; OL: oil price; GDP: gross domestic product; CPI: consumer price index; INT:
Interest rate and MS: money supply. The study discovered that the firm’s fundamental factors exercise the most significant impact on stock prices. He recognized EPS as the most influencing factor in the market.

Khawaja and Uddin (2007) attempted to relate share price with dividend per share, net asset value per share and earnings per share.

AL-Omar and AL-Mutairi (2008) made a study based on Kuwaiti commercial banks and stated that earnings and book value per share are significant determinants of share price.

Azhagaiah and Priya (2008) investigated the effect of dividend on share prices of organic and inorganic chemical companies. The study conveyed that dividend has significant influence on prices of organic chemical companies and no influence on prices of inorganic chemical companies.

Chang et al. (2008) in their study on Taiwan Stock Exchange (TSEC), identified a co-integration relationship between stock prices and EPS in the long-run and stated that for the firm with a high level of growth rate, EPS has less impact in explaining the stock prices and vice-versa.

George Tweneboah and Anokye M. Adam (2008) researched stock prices in Ghana on data from 1991 to 2006. They used t-bill rates as measures of interest rates, consumer price index as measure of inflation rate, inward foreign direct investment, and exchange rate as macroeconomic factor. After applying different available models of
correlation, regression, and integration they concluded that the exchange rate, a macroeconomic factor, has long run relationship between the stock prices of Ghana, while the inflation rate, FDI and interest rates are the key determinants of stock prices in Ghana.

**Mutairi (2008)** took a sample of seven Kuwaiti banks from 1980 to 2004 as the period of study and found earnings per share and book value per share as determinants of share prices.

**Jin Dehuan and Zhenhu Jin (2008)** investigated correlation between firm performance (return on equity, earning per share, profit margin, return on asset, changes in sales, and total asset turnover) and stock price of the top performing stocks listed in Shanghai Stock Exchange study. Their study demonstrated that all the variables are significantly correlated with stock price in the year before crisis though, in the crisis period the firm performance have no explanatory power toward stock price movement.

**Nawazish Mirza (2008)** studied book to market (B/M) ratio as key determinant of share prices. He concluded that the value and size of premium which is related to B/M ratio given to investor will boost up the investment more in the stock and as a result the stock prices will rise. It was also concluded that the size of the firm also plays a very important role in the value of stock as market capitalization and B/M ratio is used in Fama and French model to calculate the return. Nawazish supposed that besides these factors the environmental and economic factors can also influence the share prices.

**Singhania (2008)** steered a study on chemical industry and identified book
value, dividend, dividend cover, dividend yield, earnings and P/E ratio as major factors that influence share prices.

**Bapat and Raithatha (2009)**, for manufacturing firms, found profit, size of firm and volatility as significant determinants of share prices.

**G.R Fisher (2009)** determined the relationship between share prices and different quantitative variables of British. It exhibited the impact of dividends, undistributed profits, and company size on share prices acquired from five cross-sectional samples of equities quoted in the London Stock Exchange between 1949 and 1957.

**Khan (2009)** studied share price determinants for the firms listed on Dhaka Stock Exchange and apprehended dividend as a factor influencing share prices.

**Riazuddin (2009)** used random sampling method to collect data from 62 companies listed on Dhaka Stock Exchange (DSE) from December 2007 to November 2008 and found a significant linear relationship between market price of stock, net asset value per share, dividend percentage and earnings per share. By examining the stocks of firms listed on the Nigerian Stock Exchange,

**Somoye et al. (2009)** found dividend per share and earnings per share as determinants of share prices.

**Sunde and Sanderson (2009)** for Zimbabwe market undertook a review to identify the factors that influence share prices. The study reports corporate earnings,
management, lawsuits, mergers and takeovers, market liquidity and stability, availability of substitutes, government policy, macroeconomic fundamentals, investor sentiments, technical influences and analyst reports as factors influencing share prices.

**Uddin (2009)** analyzed the effect of certain microeconomic factors on the share prices of bank, leasing and insurance companies listed on Dhaka Stock Exchange. The study found dividend, earnings and net asset value per share to bear a significant relation with share prices by using multiple regression analysis. This research found a significant linear relationship among market return and some microeconomic factors such as net asset value per share, dividend percentage, earnings per share of bank leasing, and insurance companies. He also found that non-linear relationship among the variables is insignificant at 95 percent level of significance.

**Al-Shubiri (2010)** conducted simple and multiple regression analysis on data from 14 commercial banks listed in Amman Stock Exchange, Jordan and concluded that there was highly positive significant relationship between market price of stock and net asset value per share (NAV); earnings per share (EPS) and dividend percentage.

**Ghosh et.al. (2010)** tried to examine the primary factors responsible for affecting price in Bombay Stock Exchange (BSE), India. He considered oil prices, gold price, cash reserve ratio, food price inflation, call money rate, and Dollar price, FDI, foreign portfolio investment and foreign exchange reserve as determinants.

**Faris AL- Shubiri (2011)** investigated the determinants of the dividend policies of
the 60 industrial firms listed on ASE for the period of 2005-2009, and to explain their dividend payment behavior. In this study, the Tobit regression analysis and Logit regression analysis were used and the result was that there is a significant effect of leverage, institutional ownership, profitability, business risk, asset structure, growth opportunities, and firm size on the dividend payout in listed firms of Amman Stock Exchange as the same determinations of dividends policy as suggested by the developed markets.

Nirmala, Sanju and Ramachandran (2011) focused on identifying the determinants of share prices in the Indian market. The study used panel data pertaining to three sectors viz., auto, healthcare, and public sector undertakings over the period 2000-2009 and employed the fully modified ordinary least squares method. The results indicated that the variables, viz. dividend, price-earnings ratio and leverage are significant determinants of share prices for all the sectors under consideration. Moreover, profitability is one factor that is influencing share prices only in the case of auto sector.

Nisa (2011) in her research on Karachi Stock Exchange used P/E Ratio, net profit after tax, inflation, DPS, GDP and annual turnover as stock price determinants.

Sanjeet Sharma (2011) examined the empirical relationship between equity share prices and explanatory variables such as: book value per share, dividend per share, earning per share, price-earnings ratio, dividend yield, dividend payout, size in terms of sale, and net worth for the period 1993-94 to 2008-09. The results revealed that earnings per share, dividend per share, and book value per share has significant impact on the market price of share. Furthermore, results of study indicated that dividend per share and earnings per share
being the strongest determinants of market price, the results of the study supports liberal
dividend policy and suggested companies to pay regular dividends.

Sharma (2011) tried to detect the relationship of stock price with book value per
share, dividend per share, earnings per share, price-earnings ratio, dividend yield, dividend
payout, size in terms of sale and net worth. The results revealed that earning per share,
dividend per share and book value per share have significant impact on the market price of
share.

Bhatt and Sumangala (2012) collected data about EPS and market value of equity
share of 50 companies from 2006-07 to 2010-2011 and concluded that EPS has its impact
on the market value of an equity share in the Indian context.

Khan and Amanullah (2012) investigated the different determinants of share
prices and the relationship of these determinants with the share prices of Karachi Stock
Exchange (KSE) 100 index of Pakistan. 5 quantitative determinants, namely Book to
Market (B/M) ratio, price earning (P/E) ratio, dividend, gross domestic product (GDP), and
interest rate were selected to find out the direction and strength of relationship. A sample
of 34 companies was randomly selected from 34 sectors of KSE. Ten years (2000-2009)
data was collected for the sample companies and the tools used for analysis were linear
multiple regression and correlation model. It was concluded that all the factors selected
have positive and significant relationship with share prices except interest rate and B/M
ratio. The rise in GDP, dividend and P/E ratio led to the rise in share prices whereas B/M
ratio and interest rate are negatively related to share prices.
Raimony and El-Nader (2012) examined the sources of the ASE price index volatility, using monthly data between 1991 and 2010. The volatility returns of the ASE are estimated through utilizing the ARCH /GARCH model with /without dummy variable, and to measure the shocks of each variable, the Impulse Response Function (IRFs) is applied. The results of the study revealed that the ARCH (1) performs well. It also indicated that RMS2, CPI, E1, WAIR and the dummy variable have an adverse impact on the ASE returns volatility, while RGDP played a positive effect.

Nisa and Nishat (2012) used data from 221 Pakistani firms from 1995 to 2006 and revealed the firm size and Earnings per share as major determinants.

Srinivasan (2012) examined the fundamental determinants of share price in India. The study employed panel data consisting of annual time series data over the period 2006-2011 and cross-section data pertaining to 6 major sectors of the Indian economy, viz., heavy and manufacturing, pharmaceutical, energy, IT and ITES, infrastructure and banking. The panel data techniques, viz. fixed effects model and random effects model were employed to investigate the objective. The empirical results revealed that the dividend per share has a negative and significant impact on the share price of manufacturing, pharmaceutical, energy, and infrastructure sectors where as earnings per share and price-earnings ratio are the crucial determinants of share prices of manufacturing, pharmaceutical sector, energy, infrastructure, and commercial banking sectors and size is a significant factor in determining the share prices of all sectors under consideration except manufacturing. Moreover, the book value per share positively influences the share prices
of pharmaceutical, energy, IT and ITES, and infrastructure.

**Uwuigbe, Olowe, Olusegun, and Godswill (2012)** examined the determinants of share prices in the Nigerian stock exchange market. A total of 30 listed firms in the Nigerian stock exchange market were selected and analyzed for the study using the judgmental sampling technique. Also, the Nigerian stock exchange fact book and the corporate annual reports for the period 2006-2010 were used for the study. The study basically modeled the effects of financial performance, dividend Payout, and financial leverage on the share price of listed firms operating in the Nigerian stock exchange market using the regression analysis method. The study found a significant positive relationship between firms’ financial performance and the market value of share prices of the listed firms in Nigeria. Consequently, the paper concludes that firms’ financial performance, dividend payouts, and financial leverage are strong determinants of the market value of share prices in Nigeria.

**Malhotra and Tandon (2013)** attempted to determine the factors that influence stock prices in the context of National Stock Exchange (NSE) of 100 companies. A sample of 95 companies was selected for the period from 2007-12 and linear regression model was used. The results indicated that firms’ book value, earning per share, and price-earnings ratio are having a significant positive association with firm’s stock price while dividend yield is having a significant inverse association with the market price of the firm’s stock.
2.3 Research Gap

From the review of studies it is observed that many research studies have been conducted in this area but they have not provided sound theoretical and empirical explanation as to why securities sell at certain prices. Most of these studies were based on a small sample with a limited number of variables and analyzed different types of relationships without comparing their relative performances. The present study is an improvement over the earlier studies. Firstly, it employs a good number of samples i.e., twenty for the purpose of investigation. Secondly, it examines a larger number of variables than those included in earlier studies. Thirdly, it considers a maximum period of ten years for analysis.

2.4 Objectives of the Study

The main aim of the study is to measure the relationship between stock prices and company specific intrinsic factors such as dividend per share, earnings per share, book value, and size in terms of sales, dividend yield, dividend payout, return on net worth and price to earnings ratio for the period of 2003-04 to 2012-13. More specifically, the following are the objectives of the study:

(i) To examine the empirical relationship between equity share prices and explanatory variables such as book value per share, return on net worth, size in terms of sales, etc.
(ii) To analyze the relationship between the equity share price and variables, such as earnings per share, price-earnings ratio, dividend yield, dividend per share, dividend payout during the period of study.

(iii) To evaluate the impact of select non-financial determinants on market share of the price and earnings per share of the industries selected for the research.

(iv) To suggest measures for the efficient working of the selected firms of the study, so as to provide better service to their customers.

2.5 Hypotheses

Based on the above stated objectives of the study, the hypotheses are framed as follows:

\[ H_1: \text{There is a positive relationship between BV and MPS} \]

\[ H_2: \text{There is a positive relationship between size and MPS} \]

\[ H_3: \text{There is a positive relationship between RONW and MPS} \]

\[ H_4: \text{There is a positive relationship between DPS and MPS} \]

\[ H_5: \text{There is a positive relationship between EPS and MPS} \]

\[ H_6: \text{There is a positive relationship between DY and MPS} \]

\[ H_7: \text{There is a positive relationship between DP and MPS} \]
H8: There is a positive relationship between P/E and MPS

H9: There is a significant relationship between MPS and GDP

H10: There is a significant relationship between MPS and ER

H11: There is a significant relationship between EPS and GDP

H12: There is a significant relationship between EPS and ER

The hypotheses will be tested based on the statistical techniques, viz., Pearson’s correlation analysis and regression analysis.

2.6 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.
2.7 Sampling Design

2.7.1 Sampling Technique:

Non-probability sampling technique is used for the study. A Non-probability sampling is a sampling technique, where the samples are gathered in a process that does not give all the individuals in the population equal chances of being selected.

2.7.2 Convenience Sampling

As the name indicates, in convenience sampling, sample elements are selected based on the convenience of the researcher, whose data is available continuously for a period of ten years. Further, the companies are earning profits and paying dividends for the purpose of establishing the relationship among the relevant variables.

2.7.3 Sample Size:

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 the following conditions:

- It is listed in Bombay Stock Exchange
• The necessary financial data required for calculating the measures of dependent and independent variables pertaining to all the years 2003-04 to 2012-13 is available.

• Only those companies whose price data is available.

It is a known fact that the industries which are related to food, clothing and shelter are core industries of any economy. Agriculture-based industries, mining, steel, cement, etc. are said to be core industry. Irrespective of the fluctuations in economy, these industries maintain their consistency. Hence, for human beings the most essential aspects of food and clothing, agro-chemical industry has been considered for the present study. The other equal important one among the three is shelter, for which the 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.

The following are the 20 listed companies under four industrial groups that are selected as a sample for the present study.
Table 2.1: List of Sample companies Listed in Bombay Stock Exchange

<table>
<thead>
<tr>
<th>Name of the Industry</th>
<th>No. of Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agri-Chemicals</td>
<td>5</td>
</tr>
<tr>
<td>Cement</td>
<td>5</td>
</tr>
<tr>
<td>Hotel</td>
<td>5</td>
</tr>
<tr>
<td>Steel</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

2.8 Sources of Data

**Secondary data:** The objectives of the study have been studied through the use of secondary data. Data have been gathered from various sources namely BSE annual reports, SEBI annual reports, financial newspapers and financial journals.

2.9 Tools of Analysis

The following financial and statistical tools are used to study the objectives of the present research work.

2.9.1 Financial Tools

The financial tools and statistical techniques used in the present study are meant for 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 as mentioned earlier in chapter one to study the relationship between different items in financial
statements. An effort is made to use those devices, which clearly analyze the performance of the business enterprise.

2.9.2 Statistical Tools:

Under statistical tools, Mean, Standard Deviation, Co-efficient of Correlation and linear Multiple regression analysis are used. The following are the details of the statistical techniques applied in the data analysis.

(i) Co-efficient of Correlation and Multiple Regression Techniques

The correlation and a linear multiple regression models have been selected to measure the individual as well as combined effects of explanatory variables on the dependent variables. 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 analyses. 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:  \[ MPS = a_0 + b_1 \text{ BV} + b_2 \text{ SIZE} + b_3 \text{ RONW} + e_1 \]

Where, MPS is dependent variable

\[ a_0 = \text{constant term} \]
\( b_1, b_2, b_3 \) are the regression coefficients of BV, SIZE and RONW respectively.

\( e_1 \) = error term

**Equation 2**

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

Where, MPS is dependent variable

\( a_0 \) = constant term

\( b_4, b_5, b_6, b_7, b_8 \) are the regression coefficients of DPS, EPS, DY, DP and P/E respectively.

\( e_2 \) = error term

**Equation 3**

**Regression Model:**
\[
\text{MPS} = b_0 + b_1 \text{GDP} + b_2 \text{ER} + e_i
\]

Where: MPS is Dependent variable,

\( b_0 \) = Intercept for X variable of i company.

\( b_1, b_2 \) are the regression Coefficients of GDP and ER respectively, \( e_i \) = the error term.

**Equation 4**

**Regression Model:**
\[
\text{EPS} = b_0 + b_1 \text{GDP} + b_2 \text{ER} + e_i
\]

Where: EPS is Dependent variable,

\( b_0 \) = Intercept for X variable of i company,

\( b_1, b_2 \) are the regression Coefficients of GDP and ER respectively, \( e_i \) = the error term.
(ii) **Significance Tests:**

The statistical significance of regression coefficients has 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.

**Table 2.2: Variables Selected for the Analysis of Equity share price Determinants**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market price (MPS)</td>
<td>The market price at which an asset trades</td>
</tr>
<tr>
<td>Dividend per share (DPS)</td>
<td>Total amount of dividend paid to equity shareholders/ No. of equity shares outstanding</td>
</tr>
<tr>
<td>Earnings per share (EPS)</td>
<td>Net profit after tax-preference dividend/ No. of equity shares outstanding</td>
</tr>
<tr>
<td>Book value (BV)</td>
<td>Equity share capital + shareholder’s reserves/ No. of equity shares outstanding</td>
</tr>
<tr>
<td>Dividend payout ratio (DP)</td>
<td>Dividend per share/ Earnings per share * 100</td>
</tr>
<tr>
<td>Return on net worth (RONW)</td>
<td>Net profit after tax/ shareholder capital + Retained earnings</td>
</tr>
<tr>
<td>Price earnings ratio (P/E):</td>
<td>Market price of the share/ earnings per share</td>
</tr>
<tr>
<td>Size</td>
<td>Log of Total Assets</td>
</tr>
</tbody>
</table>
2.10 Limitations of the Study:

The present study has been the result of empirical analysis based on secondary data that is taken from the published annual reports and accounts of the companies which are selected for the study. Hence, the whole outcome of the study depends on the consistency, precision and eminence of the said data. Also, there is no usage of primary data in the study. Subsequently difference of opinions exists in the adoption of different methods. The ratio analysis itself has its own limitations and the present study is mostly based on it. Some of the external factors are not considered in this study that affect equity share price of the company.

2.11 Plan of the Study:

The present study is organized into five chapters and the details are follows:

**Chapter One**, which is introductory, deals with the nature and relative importance of stock markets, features of stock markets, importance of investor in stock markets, structure of stock exchanges in India, powers exercised by stock markets, trading procedure of stock markets., and presents the comprehensive theoretical review including variables which are taken as the determinants of the study.

**Chapter Two** comprises the procedural approach engaged in this study. For the most part, it focuses on the statement of the research problem, scope of the study, significance of the study, research objectives and hypotheses, methodology of the study,
sample selection, source of data and period of study, model specification and methods of data analysis, limitations of the study and finally, organization of the study.

**Chapter Three** explains the profile of select industries and profiles of select companies in the select industries.

**Chapter Four** deals with the detailed discussion on the descriptive statistics of the calculated determinants, regression and correlation results of various determinants of equity shares which explains the first two objectives mentioned in the study, comparative analysis and the findings deduced from the calculations.

**Chapter Five** proposes to describe the third objective with the help of regression and correlation analysis of non-financial determinants of the stock prices selected for the study, comparative analysis and findings deduced from the calculations.

**Chapter Six** summarizes the main findings of the study and draw the conclusions and discusses some of the possible implications of the findings. Finally, it ends with suggestions and also scope for further research. More specifically, the chapter is submitted the outcome of the earlier studies as the general background, theoretical framework and empirical evidence regarding the determinants of the equity share prices and followed by section one provides the findings of the analysis. Section two presents the conclusions of the study, section three provides some of their possible implications and the last section arranged the suggestions and scope for further research.

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