# Fundamental Determinants affecting Equity Share Prices of BSE200 Companies in India 

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#### Abstract

The stock market plays a pivotal role in the growth of the industry and commerce of the country that eventually affects the economy of the country. This is the reason that government, industry and even the central banks of the country have a close watch on the daily happenings of the stock market. The objective of this paper is to find out the combined effect of key variables on equity share prices of Indian companies that are listed in BSE 200. It can be concluded that Earning Per Share is emerged as significant determinant with the positive sign in three years out of seven years while Dividend Per Share is significantly negative in two years. Book Value Per Share has influenced the market price of share significantly in five out of seven years. Price Earning Ratio has emerged a significant positive determinant in two years out of seven years. Dividend Payout Ratio has emerged as significant determinant of market price of share with the negative sign in two out of the seven years of study.


Key Words : Fundamental Factors, BSE, Equity Share Prices, EPS, DPS etc.

## 1. Introduction

Stock market is one of the major economic reflectors. Indian economy is currently emerging as a global super power. Due to liberalization, privatization and globalization Indian stock market has observed a lot of changes in the last few years. As a result, the virtual magnitude of the factors influencing the share prices has undergone some other type of changes. In addition to this, demand and supply forces are also associated with changes in fundamental factors that are relevant for share price valuation like earnings per share, dividend per share, payout ratio, return on capital employed, capital structure, cover, size of the firm and its growth. There are several factors which are directly or indirectly related to share prices

## 2. Literature Review

The link between fundamental factors and share price changes has been extensively investigated in the financial literature. Sen and Ray (2003) examined the key determinants of stock price in India. The study is based upon the stocks compromising the BSE index over a period 1988-2000. The empirical study revealed dividend payout was an important factor affecting stock prices. Further, they found earning per share has a very weak impact on the share prices. The study explored one of the crucial factor dividend payout ratios having impact on Indian stock price. Sharma and Singh (2006) used data from 160 Indian firms between 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. Dividend per share is most significant variable of market price of share, which indicates that the companies should use a liberal dividend policy to attract the primary as well as secondary market. Price-earnings ratio also explained the investors' anticipate about the growth in the firm's earnings. Srivastava (2010) concluded that emerging economies like India in long term are more affected by domestic macro economic factors than global factors. The main domestic macroeconomic factors affecting the stock market in long run are industrial production; wholesale price index and interest rate. Sharma (2011) examined the empirical relationship between equity share prices of different industry groups 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 1993-2008. The results revealed that earning per share, dividend per share and book value per share has significant impact on the equity price of different industry groups in India. Aurangzeb (2012) presented a study from the period of 1997 to 2010 of 3 South Asian countries namely, Pakistan, India and Sri Lanka. Regression results indicate that foreign direct investment and exchange rate have significant positive impact on performance of stock market in South Asian countries while; interest rate has negative and significant impact on performance of stock market in South Asia. Results also indicate the negative but insignificant impact of inflation on stock market performance in South Asia. Malhotra and Tandon (2013) have presented a study with an attempt to determine the factors that influence stock prices in the context of National Stock Exchange (NSE) 100 companies. A sample of 95
companies was selected for the period 2007-12 and using linear regression model the results indicate 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.

## 3. Research Objectives and Methodology

The main objective of this paper is to find out the combined effect of key variables on equity share prices of Indian companies that are listed in BSE 200 and to empirically examine the relationship between stock prices and fundamental factors.
3.1 Hypothesis of the Study
$\mathrm{H}_{01}$ - There is no significant impact of the fundamental factors on stock prices.
3.2 Research Design

The present study is attempted to examine the empirical relationship of explanatory variables namely, Book Value Per Share, Dividend Per Share, Earnings Per Share, Cover, Payout Ratio, Price Earning Ratio, Return on Capital Employed and Growth on market price of shares in the post reform era of liberalization.
3.3 Scope of Study
3.3.1 Fundamental Factors

Eight key variables such as: Book Value Per Share (BV), Dividend Per Share (DPS), Earnings Per Share (EPS), Cover (C), Payout Ratio (P), Price Earning Ratio (P/E), Return on Capital Employed (ROCE) and Growth (G) have been included in the study.

### 3.3.2 Sample Profile

To examine the various hypotheses, the researcher has used secondary data. The sample was drawn from the companies listed on the Bombay Stock Exchange. The yearly data has been used on the concerning aspect of the thesis out of two hundred companies of BSE, finally a sample of eighty companies was selected for the purpose of the study with the fact that the companies have been listed continuously during the study period. 3.3.3 Time period
The study is based on seven financial years i.e. from 1st April 2006 to 31st March 2013.
3.4 Data Collection

The data relating to the companies which are listed in BSE 200 have been collected on yearly basis from updated version 'PROWESS 4' database of the Centre for Monitoring Indian Economy and Bombay Stock Exchange Official Directory.
3.5 Analytical and Statistical Tools

To study the impact of independent variables on stock prices multiple regression model is used in hypothesis testing and analyzing the data.
i) Multiple Regression Model
"Multiple Regression Model" has been used for evaluating the individual and combined effect of a set of independent variables on dependent variable. To ascertain the factors affecting equity share prices, the collected data has been analyzed by applying the function of the following form:
$Y=a+b_{1} X_{1}+b_{2} X_{2}+b_{3} X_{3}+b_{4} X_{4}+b_{5} X_{5}+b_{6} X_{6}+b_{7} X_{7}+b_{8} X_{8}+e$
Where, Y is equity share prices; $\mathrm{X}_{1}$ - Book Value Per Share; $\mathrm{X}_{2}$ - Dividend Per Share; $\mathrm{X}_{3}$-Earnings Per Share; $\mathrm{X}_{4}$-Cover; $\mathrm{X}_{5}$-Payout Ratio; $\mathrm{X}_{6}$-Price Earning Ratio; $\mathrm{X}_{7}$-Return on Capital Employed; $\mathrm{X}_{8}$-Growth; a - is constant term; bi ( $\mathrm{b}_{1} \ldots . . \mathrm{b}_{8}$ ) are regression coefficients; and e is random term.
ii) Durbin Watson Test
iii) Breusch-Godfrey Serial Correlation LM Test
iv) Breusch Pagan Godfrey (ARCH LM) test
viii) ANOVA (f) Test
ix) t-test

## 4. Empirical Results

In this study, to achieve this objective year wise analysis has been comprised to find out the combined as well as individual effect of key variables on equity share prices of Indian companies that are listed in BSE 200. Table 4.1 presents the results of regression statistics for the year 2006-07. The value of R square is 0.652 representing 65 percent of the variation in the market share prices can be explained by the independent variables considered in the model. The remaining about 35 percent variations in the share prices are due to other factors which are not considered in the model. Moreover the F statistics reports the validity of the estimated model i.e. joint
significance of the independent variables. Table 4.1 shows the analyzed results of the individual significance of the determinants which reveal that Growth and EPS has a positive and significant impact on the share prices at 5 percent and 10 percent level respectively. This implies that an increase in Growth and EPS are liable for significant increase in share prices. Further ROCE, DPS and Cover have inverse relationship and significant at 5 percent level. The variable DPR has inverse relation with the share prices but they are not statistically significant. The variable PER and BV have positive but insignificant relationship with the share price. The Durbin Watson test which has been applied to examine the existence of autocorrelation in the data series reveals the absence of autocorrelation as its value is near 2 . Hence, the results of the model give reliable estimates.

Table 4.1: Regression Analysis of the Determinants of Market Share Price (2006-07)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| :--- | :--- | :--- | :--- | :--- |
| C | 853.8135 | 237.6816 | 3.592258 | 0.0006 |
| BV | 0.206195 | 1.546387 | 0.133340 | 0.8943 |
| DPS | $-23.9647^{* *}$ | 20.21477 | -1.185509 | 0.0398 |
| EPS | $3.79408^{* * *}$ | 7.008986 | 0.541317 | 0.0900 |
| COVER | $-2.94002^{* *}$ | 3.523395 | -0.834428 | 0.0068 |
| DPR | -118.3678 | 369.7448 | -0.320134 | 0.7498 |
| PER | 0.162258 | 1.407195 | 0.115306 | 0.9085 |
| ROCE | $-8.23320^{* *}$ | 8.146326 | -1.010665 | 0.0156 |
| GROWTH | $1.58042^{* *}$ | 3.031789 | 0.521285 | 0.0038 |
| R-squared | 0.65220 |  |  |  |
| Adjusted R-squared | 0.47854 |  |  |  |
| F-statistic | $0.8267 * * *$ |  |  |  |
| Prob(F-statistic) | 0.081850 |  |  |  |
| Durbin-Watson stat | 1.909480 |  |  |  |

*significant at 1 percent level of significance, ${ }^{* *}$ significant at 5 percent level of significance, ${ }^{* * *}$ significant at 10 percent level of significance. Source: All the numerical figures of Table are calculated from eviews6 version

Table 4.1.1 Breusch-Godfrey Serial Correlation LM Test (2006-07):

| F-statistic | 0.230184 | Prob. F(2,69) | 0.7950 |
| :---: | :---: | :---: | :--- |
| Obs*R-squared | 0.530222 | Prob. Chi-Square(2) | $\mathbf{0 . 7 6 7 1}$ |

Table 4.1.2 Heteroskedasticity Test: Breusch-Pagan-Godfrey (2006-07)

| F-statistic | 0.625699 | Prob. F(8,71) | 0.7535 |
| :---: | :---: | :---: | :---: |
| Obs*R-squared | 5.268658 | Prob. Chi-Square(8) | $\mathbf{0 . 7 2 8 5}$ |

Source: All the numerical figures of Table are calculated from eviews6 version
From Table 4.1.1 Breusch-Godfrey Serial Correlation LM test reports that residuals are not auto correlated. Further from the Table 4.1.2 ARCH -LM (Breusch-Pagan-Godfrey) test does not indicate the presence of a significant ARCH effect i.e. there is no heterocidasticity in the data taken for the study.

Table 4.2 elucidates the results of regression statistics for the year 2007-08. The value of R square is 0.485 representing 48 percent of the variation in the market share prices can be explained by the independent variables considered in the model. The remaining about 52 percent variations in the share prices are due to other factors which are not considered in the model. Moreover the F statistics reports the validity of the estimated model i.e. joint significance of the independent variables.

Table 4.2: Regression Analysis of the Determinants of Market Share Price (2007-08)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| :--- | :--- | :--- | :--- | :--- |
| C | 889.5188 | 299.8773 | 2.966276 | 0.0041 |
| BV | $1.09699^{* * *}$ | 1.259202 | 0.871186 | 0.0866 |
| DPS | -7.281807 | 21.93857 | -0.331918 | 0.7409 |
| EPS | $-3.26288^{* *}$ | 4.266178 | -0.764826 | 0.0469 |
| COVER | -0.451409 | 1.899373 | -0.237662 | 0.8128 |
| DPR | $-339.577^{* *}$ | 509.9816 | -0.665861 | 0.0077 |
| PER | $-4.08266^{* *}$ | 6.036380 | -0.676343 | 0.0010 |
| ROCE | -2.127666 | 8.109919 | -0.262354 | 0.7938 |
| GROWTH | 0.862710 | 3.899728 | 0.221223 | 0.8256 |
| R-squared | 0.48524 |  |  |  |
| Adjusted R-squared | 0.68699 |  |  |  |
| F-statistic | $0.36520^{* *}$ |  |  |  |
| Prob(F-statistic) | 0.035459 |  |  |  |
| Durbin-Watson stat | 1.814251 |  |  |  |

*significant at 1 percent level of significance, ${ }^{* *}$ significant at 5 percent level of significance, ${ }^{* * *}$ significant at 10 percent level of significance. Source : All the numerical figures of Table are calculated from eviews6 version

The empirical results reveal that Book Value has a positive and significant impact on the share prices at 10 percent level. This implies that an increase in has resulted significant increase in share prices. Further EPS, DPR and PER have inverse relationship and significant at 5 percent level. The variable DPS and ROCE have inverse relation with the share prices but they are not statistically significant. The variable ROCE has positive but insignificant relationship with the share price. The Durbin Watson test which has been applied to examine the existence of autocorrelation in the data series reveals the absence of autocorrelation as its value is near 2. Hence, the results of the model give reliable estimates.

Table 4.2.1 Breusch-Godfrey Serial Correlation LM Test (2007-08):

| F-statistic | 0.323777 | Prob. F(2,69) | 0.7245 |
| :---: | :---: | :---: | :--- |
| Obs*R-squared | 0.743806 | Prob. Chi-Square(2) | $\mathbf{0 . 6 8 9 4}$ |

Table 4.2.2 Heteroskedasticity Test: Breusch-Pagan-Godfrey (2007-08):

| F-statistic | 0.233984 | Prob. F(8,71) | 0.9832 |
| :---: | :---: | :---: | :--- |
| Obs*R-squared | 2.054976 | Prob. Chi-Square(8) | $\mathbf{0 . 9 7 9 3}$ |

Source: All the numerical figures of Table are calculated from eviews 6 version

From Table 4.2.1 Breusch-Godfrey Serial Correlation LM test indicates that residuals are not auto correlated. Further from the Table 4.2.2 ARCH -LM (Breusch-Pagan-Godfrey) test does not indicate the presence of a significant ARCH effect i.e. there is no heterocidasticity in the data taken for the study.

Table 4.3 presents the results of regression statistics for the year 2008-09. The value of R square is 0.406 representing 41 percent of the variation in the market share prices can be explained by the independent variables considered in the model. The remaining about 59 percent variations in the share prices are due to other factors which are not considered in the model. Moreover the F statistics reports the validity of the estimated model i.e. joint significance of the independent variables. The empirical results reveal that EPS and ROCE have a positive and significant impact on the share prices at 10 percent level. This implies that an increase in EPS and ROCE are accountable for significant increase in share prices. Further Cover has inverse relationship and significant at 10 percent level. The variable DPR, DPS and Growth have inverse relation with the share prices but they are not statistically significant. The variables BV and PER have positive and insignificant relationship with the share price. The Durbin Watson test which has been applied to examine the existence of autocorrelation in the data series reveals the absence of autocorrelation as its value is near 2 . Hence, the results of the model give reliable estimates.

Table 4.3: Regression Analysis of the Determinants of Market Share Price (2008-09)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| :--- | :--- | :--- | :--- | :--- |
| C | 475.9979 | 165.1081 | 2.882948 | 0.0052 |
| BV | 0.066356 | 0.823865 | 0.080542 | 0.9360 |
| DPS | -0.789941 | 13.89320 | -0.056858 | 0.9548 |
| EPS | $0.23818^{* * *}$ | 4.055725 | 0.058727 | 0.0533 |
| COVER | $-0.27348^{* * *}$ | 1.445356 | -0.189215 | 0.0505 |
| DPR | -22.71013 | 465.9260 | -0.048742 | 0.9613 |
| PER | 0.882555 | 9.431995 | 0.093570 | 0.9257 |
| ROCE | $1.95885^{* * *}$ | 4.548237 | -0.430685 | 0.0680 |
| GROWTH | -0.060458 | 0.630758 | -0.095849 | 0.9239 |
| R-squared | 0.406586 |  |  |  |
| Adjusted R-squared | 0.405348 |  |  |  |
| F-statistic | $0.0588^{* * *}$ |  |  |  |
| Prob(F-statistic) | 0.099878 |  |  |  |
| Durbin-Watson stat | 2.169648 |  |  |  |

*significant at 1 percent level of significance, ${ }^{* *}$ significant at 5 percent level of significance, ${ }^{* * *}$ significant at 10 percent level of significance. Source: All the numerical figures of Table are calculated from eviews6 version

Table 4.3.1 Breusch-Godfrey Serial Correlation LM Test (2008-09):

| F-statistic | 0.469812 | Prob. F(2,69) | 0.6271 |
| :---: | :---: | :---: | :--- |
| Obs*R-squared | 1.074784 | Prob. Chi-Square(2) | $\mathbf{0 . 5 8 4 3}$ |

Table 4.3.2 Heteroskedasticity Test: Breusch-Pagan-Godfrey (2008-09):

| F-statistic | 0.135413 | Prob. F(8,71) | 0.9974 |
| :---: | :---: | :---: | :--- |
| Obs*R-squared | 1.202283 | Prob. Chi-Square(8) | $\mathbf{0 . 9 9 6 6}$ |

Source: All the numerical figures of Table are calculated from eviews6 version
From Table 4.3.1 Breusch-Godfrey Serial Correlation LM test directs that residuals are not auto correlated. Further from the Table 4.3.2 ARCH -LM (Breusch-Pagan-Godfrey) test does not indicate the presence of a significant ARCH effect i.e. there is no heterocidasticity in the data taken for the study.

Table 4.4 documents the results of regression statistics for the year 2009-10. The value of R square is 0.583 representing 58 percent of the variation in the market share prices can be explained by the independent variables considered in the model. The remaining about 42 percent variations in the share prices are due to other factors which are not considered in the model. Moreover the F statistics reports the validity of the estimated model i.e. joint significance of the independent variables.

Table 4.4: Regression Analysis of the Determinants of Market Share Price (2009-10)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| :--- | :--- | :--- | :--- | :--- |
| C | 1378.498 | 395.8417 | 3.482448 | 0.0009 |
| BV | $-0.79037^{* * *}$ | 1.422010 | -0.555813 | 0.0801 |
| DPS | $36.1990^{* * *}$ | 33.77806 | 1.071674 | 0.0875 |
| EPS | -3.960832 | 7.609594 | -0.520505 | 0.6043 |
| COVER | 0.671956 | 2.332648 | 0.288066 | 0.7741 |
| DPR | $-854.247^{* *}$ | 1099.149 | -0.777190 | 0.0396 |
| PER | $1.68832^{* *}$ | 2.173506 | 0.776773 | 0.0399 |
| ROCE | $-8.68826^{* *}$ | 8.843044 | -0.982496 | 0.0292 |
| GROWTH | 1.365905 | 5.634581 | -0.242415 | 0.8092 |
| R-squared | 0.58368 |  |  |  |
| Adjusted R-squared | 0.47732 |  |  |  |
| F-statistic | $0.55012^{* *}$ |  |  |  |
| Prob(F-statistic) | 0.0184668 |  |  |  |
| Durbin-Watson stat | 1.929442 |  |  |  |

*significant at 1 percent level of significance, ${ }^{* *}$ significant at 5 percent level of significance, ${ }^{* * *}$ significant at 10 percent level of significance. Source: All the numerical figures of Table are calculated from eviews6 version

The empirical results reveal that DPS and PER have a positive and significant impact on the share prices at 10 percent level. This implies that an increase in DPS and PER is responsible for significant increase in share prices. Further BV and DPR has inverse relationship and significant at 5 percent and 10 percent level respectively. The variable EPS has inverse relation with the share prices but they are not statistically significant. The variable Cover and Growth have positive but insignificant relationship with the share price. The Durbin Watson test which has been applied to examine the existence of autocorrelation in the data series reveals the absence of autocorrelation as its value is near 2 . Henceforth, the results of the model give reliable estimates.

Table 4.4.1 Breusch-Godfrey Serial Correlation LM Test (2009-10):

| F-statistic | 0.212840 | Prob. F(2,69) | 0.8088 |
| :---: | :---: | :---: | :--- |
| Obs*R-squared | 0.490516 | Prob. Chi-Square(2) | $\mathbf{0 . 7 8 2 5}$ |

Table 4.4.2 Heteroskedasticity Test: Breusch-Pagan-Godfrey (2009-10)

| F-statistic | 0.371453 | Prob. F(8,71) | 0.9323 |
| :---: | :---: | :---: | :---: |
| Obs*R-squared | 3.213803 | Prob. Chi-Square(8) | $\mathbf{0 . 9 2 0 2}$ |

Source: All the numerical figures of Table are calculated from eviews6 version

From Table 4.4.1 Breusch-Godfrey Serial Correlation LM test indicates that residuals are not auto correlated. Further from the Table 4.4.2 ARCH -LM (Breusch-Pagan-Godfrey) test does not indicate the presence of a significant ARCH effect i.e. there is no heterocidasticity in the data taken for the study.

Table 4.5 displays the results of regression statistics for the year 2010-11. The value of R square is 0.620 representing 62 percent of the variation in the market share prices can be explained by the independent variables considered in the model. The remaining about 38 percent variations in the share prices are due to other factors which are not considered in the model. Moreover the F statistics reports the validity of the estimated model i.e. joint significance of the independent variables.

Table 4.5: Regression Analysis of the Determinants of Market Share Price (2010-11)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| :--- | :--- | :--- | :--- | :--- |
| C | 1471.739 | 454.6656 | 3.236970 | 0.0018 |
| BV | $-1.96507^{* * *}$ | 1.389785 | -1.413941 | 0.0617 |
| DPS | 16.05953 | 29.37028 | 0.546795 | 0.5862 |
| EPS | 1.897169 | 6.756559 | 0.280789 | 0.7797 |
| COVER | 1.740296 | 3.354206 | 0.518840 | 0.6055 |
| DPR | $1000.01^{* * *}$ | 1136.690 | 0.879756 | 0.0820 |
| PER | $-6.30886^{* *}$ | 9.465192 | -0.666533 | 0.0072 |
| ROCE | $-11.611^{* * *}$ | 10.94732 | -1.060707 | 0.0924 |
| GROWTH | $8.41688^{* *}$ | 7.218004 | -1.166096 | 0.0475 |
| R-squared | 0.62003 |  |  |  |
| Adjusted R-squared | 0.21433 |  |  |  |
| F-statistic | $0.7927^{* *}$ |  |  |  |
| Prob(F-statistic) | 0.010677 |  |  |  |
| Durbin-Watson stat | 1.929442 |  |  |  |

*significant at 1 percent level of significance, ${ }^{* *}$ significant at 5 percent level of significance, ${ }^{* * *}$ significant at 10 percent level of significance. Source: All the numerical figures of Table are calculated from eviews6 version

The empirical results reveal that Growth and DPR have a positive and significant impact on the share prices at 5 percent and 10 percent level respectively. This implies that an increase in DPS and PER is liable for significant increase in share prices. Further PER, BV and ROCE has inverse relationship and significant at 5 percent and 10 percent level. The variable DPS, EPS and Cover have positive but insignificant relationship with the share price. The Durbin Watson test which has been applied to examine the existence of autocorrelation in the data series reveals the absence of autocorrelation as its value is near 2 . Hence, the results of the model give reliable estimates.

Table 4.5.1Breusch-Godfrey Serial Correlation LM Test (2010-11):

| F-statistic | 0.494217 | Prob. F(2,69) | 0.6122 |
| :---: | :---: | :---: | :---: |
| Obs*R-squared | 1.129825 | Prob. Chi-Square(2) | $\mathbf{0 . 5 6 8 4}$ |

Table 4.5.2 Heteroskedasticity Test: Breusch-Pagan-Godfrey (2010-11):

| F-statistic | 0.460603 | Prob. F(8,71) | 0.8796 |
| :---: | :---: | :---: | :--- |
| Obs*R-squared | 3.947064 | Prob. Chi-Square(8) | $\mathbf{0 . 8 6 1 9}$ |

Source: All the numerical figures of Table are calculated from eviews6 version
From Table 4.5.1 Breusch-Godfrey Serial Correlation LM test indicates that residuals are not auto correlated. Further from the Table 4.5.2 ARCH -LM (Breusch-Pagan-Godfrey) test does not indicate the presence of a significant ARCH effect i.e. there is no heterocidasticity in the data taken for the study.

Table 4.6 provides the results of regression statistics for the year 2011-12. The value of R square is 0.692 representing 69 percent of the variation in the market share prices can be explained by the independent variables considered in the model. The remaining about 31 percent variations in the share prices are due to other factors which are not considered in the model. Moreover the F statistics reports the validity of the estimated model i.e. joint significance of the independent variables. The empirical results reveal that Growth and DPR have a positive and significant impact on the share prices at 5 percent and 10 percent level respectively. This implies that an increase in DPS and PER has occurred to be responsible for significant increase in share prices. Further PER, BV and ROCE have inverse relationship and significant at 5 percent and 10 percent level respectively. The variable DPS, EPS and Cover have positive but insignificant relationship with the share price. The Durbin Watson test which has been applied to examine the existence of autocorrelation in the data series reveals the absence of autocorrelation as its value is near 2 . Hence, the results of the model give reliable estimates.

Table 4.6: Regression Analysis of the Determinants of Market Share Price (2011-12)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| :--- | :--- | :--- | :--- | :--- |
| C | 1011.919 | 500.4698 | 2.021938 | 0.0470 |
| BV | $-2.23403^{* *}$ | 1.346982 | -1.658548 | 0.0016 |
| DPS | $27.6437 * * *$ | 29.41237 | 0.939870 | 0.0505 |
| EPS | $7.39774^{* * *}$ | 8.557714 | 0.864454 | 0.0903 |
| COVER | -0.283812 | 15.97386 | -0.017767 | 0.9859 |
| DPR | $1277.67 * *$ | 908.7703 | 1.405934 | 0.0641 |
| PER | -3.725611 | 13.36724 | -0.278712 | 0.7813 |
| ROCE | $-24.315^{* * *}$ | 13.78367 | -1.764056 | 0.0820 |
| GROWTH | 3.769779 | 8.520900 | 0.442416 | 0.6595 |
| R-squared | 0.692126 |  |  |  |
| Adjusted R-squared | 0.60170 |  |  |  |
| F-statistic | $0.7927 * *$ |  |  |  |
| Prob(F-statistic) | 0.010677 |  |  |  |
| Durbin-Watson stat | 1.862456 |  |  |  |

*significant at 1 percent level of significance, ${ }^{* *}$ significant at 5 percent level of significance, ${ }^{* * *}$ significant at 10 percent level of significance.Source : All the numerical figures of Table are calculated from eviews6 version

Table 4.6.1 Breusch-Godfrey Serial Correlation LM Test (2011-12):

| F-statistic | 0.447927 | Prob. F(2,69) | 0.6408 |
| :---: | :---: | :---: | :---: |
| Obs*R-squared | 1.025359 | Prob. Chi-Square(2) | $\mathbf{0 . 5 9 8 9}$ |

Table 4.6.2 Heteroskedasticity Test: Breusch-Pagan-Godfrey (2011-12)

| F-statistic | 0.743085 | Prob. F(8,71) | 0.6533 |
| :---: | :---: | :---: | :--- |
| Obs*R-squared | 6.180733 | Prob. Chi-Square(8) | $\mathbf{0 . 6 2 7 0}$ |

Source: All the numerical figures of Table are calculated from eviews6 version

From Table 4.6.1 Breusch-Godfrey Serial Correlation LM test indicates that residuals are not auto correlated. Further from the Table 4.6.2 ARCH -LM (Breusch-Pagan-Godfrey) test does not indicate the presence of a significant ARCH effect i.e. there is no heterocidasticity in the data taken for the study.

Table 4.7 documents the results of regression statistics for the year 2012-13. The value of R square is 0.618 representing 62 percent of the variation in the market share prices can be explained by the independent variables considered in the model. The remaining about 38 percent variations in the share prices are due to other factors which are not considered in the model. Moreover the F statistics reports the validity of the estimated model i.e. joint significance of the independent variables.

Table 4.7: Regression Analysis of the Determinants of Market Share Price (2012-13)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| :--- | :--- | :--- | :--- | :--- |
| C | 1232.463 | 523.0304 | 2.356389 | 0.0216 |
| BV | $-1.93565^{* * *}$ | 1.734520 | -1.115960 | 0.0687 |
| DPS | 11.00757 | 39.56672 | 0.278203 | 0.7818 |
| EPS | 5.213405 | 12.64159 | 0.412401 | 0.6814 |
| COVER | $-13.4798^{* *}$ | 20.85793 | -0.646267 | 0.0205 |
| DPR | $1335.36^{* * *}$ | 765.3564 | 1.744756 | 0.0859 |
| PER | $-13.9541^{* *}$ | 13.07023 | -1.067631 | 0.0898 |
| ROCE | $-16.7761^{* *}$ | 13.27159 | -1.264064 | 0.0109 |
| GROWTH | $29.4958^{* *}$ | 13.21139 | 2.232603 | 0.0291 |
| R-squared | 0.618085 |  |  |  |
| Adjusted R-squared | 0.600095 |  |  |  |
| F-statistic | $1.05442^{* *}$ |  |  |  |
| Prob(F-statistic) | 0.03157 |  |  |  |
| Durbin-Watson stat | 2.031376 |  |  |  |

*significant at 1 percent level of significance, ${ }^{* *}$ significant at 5 percent level of significance, ${ }^{* * *}$ significant at 10 percent level of significance. Source: All the numerical figures of Table are calculated from eviews6 version

The empirical results reveal that Growth and DPR have a positive and significant impact on the share prices at 5 percent and 10 percent level respectively. This implies that an increase in DPS and PER has proved to be accountable for significant increase in share prices. Further Cover, PER and ROCE have inverse relationship and significant at 5 percent and 10 percent level respectively. The variable DPS and EPS have positive but insignificant relationship with the share price. The Durbin Watson test which has been applied to examine the existence of autocorrelation in the data series reveals the absence of autocorrelation as its value is near 2 . Hence, the results of the model give reliable estimates.

Table 4.7.1 Breusch-Godfrey Serial Correlation LM Test (2012-13):

| F-statistic | 0.323142 | Prob. F(2,61) | 0.7251 |
| :---: | :---: | :---: | :--- |
| Obs*R-squared | 0.754829 | Prob. Chi-Square(2) | $\mathbf{0 . 6 8 5 6}$ |

Table 4.7.2 Heteroskedasticity Test: Breusch-Pagan-Godfrey (2012-13)

| F-statistic | 0.639058 | Prob. F(8,63) | 0.7419 |
| :---: | :---: | :---: | :--- |
| Obs*R-squared | 5.404262 | Prob. Chi-Square(8) | $\mathbf{0 . 7 1 3 6}$ |

Source: All the numerical figures of Table are calculated from eviews6 version

From Table 4.7.1 Breusch-Godfrey Serial Correlation LM test indicates that residuals are not auto correlated. Further from the Table 4.7.2 ARCH -LM (Breusch-Pagan-Godfrey) test does not indicate the presence of a significant ARCH effect i.e. there is no heterocidasticity in the data taken for the study.
It is evidently clear from the results of regression analysis depicted in Table 4.8, it is found that Earning Per Share is emerged as significant determinant with the positive sign in three years out of seven years period under study i.e. 2006-07, 2008-09 and 2011-12. Earning per share is significantly negative in the year 2007-08. Dividend Per Share is significantly negative in two years i.e. 2006-07 and 2008-09. Dividend Per Share has remained insignificant in 2007-08, 2009-10, 2011-12 and 2012-13. Book Value Per Share has influenced the market price of share significantly in five out of seven years. But it has shown both positive and negative association. Book Value Per Share has shown positive association in three years, viz., 2007-08, which may be attributed to the increasing reserves of the companies resulting in an increase in the market price of share. The negative association has occurred in 2009-10, 2010-11, 2011-12 and 2012-13 which may be due to issue of bonus shares in these years, resulting in a decrease in book value per share. However, it has remained insignificant during 2006-07 and 2008-09. Price Earning Ratio has emerged a significant positive determinant in two years out of seven years, viz., 2009-10 and 2012-13. Price Earning Ratio is significant negative determinant in two years out of fifteen years, viz., 2007-08 and 2010-11. Dividend Payout Ratio has emerged as significant determinant of market price of share with the negative sign in two out of the seven years of study i.e., 2007-08 and 2009-10. Dividend Payout Ratio is positive significant determinant of market price of share in three out of the seven years period of study i.e., 2010-11, 2011-12 and 2012-13. Growth in terms of sale has appeared as significant positive determinants of market

Table: 4.8 Compiled Year-Wise Regression Analysis of the Determinants of Market Share Price for the Whole Time Slots (1998-2013)

| Year | $\mathrm{R}^{2}$ | F-VALUE | $\begin{gathered} \text { D-W } \\ \text { STAT } \end{gathered}$ | t-test-variables significant at |  |  | Serial Correlation | Heterocidasity |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1\% | 5\% | 10\% |  |  |
| $\begin{gathered} 2006- \\ 07 \end{gathered}$ | 65\% | 0.82(0.081) | 1.90 | -------- | GROWTH (DPS, COVER ROCE) | EPS | NO | NO |
| $\begin{gathered} 2007- \\ 08 \end{gathered}$ | 48\% | 0.36(0.035) | 1.81 | ------- | (EPS,DPR\&PER) | BV | NO | NO |
| $\begin{gathered} 2008- \\ 09 \end{gathered}$ | 41\% | 0.058(0.099) | 2.16 | ------- | ------------------- | EPS <br> \&ROCE(COVER) | NO | NO |
| $\begin{gathered} 2009- \\ 10 \end{gathered}$ | 58\% | 0.55(0.018) | 1.92 | -------- | PER(DPR\&ROCE) | DPS(BV) | NO | NO |
| $\begin{gathered} 2010- \\ 11 \\ \hline \end{gathered}$ | 62\% | 0.79(0.010) | 1.92 | -------- | GROWTH (PER) | DPR(BV\&ROCE) | NO | NO |
| $\begin{gathered} 2011- \\ 12 \end{gathered}$ | 69\% | 0.79(0.010) | 1.86 | -------- | DPR(BV) | EPS \&DPS (ROCE) | NO | NO |
| $\begin{gathered} 2012- \\ 13 \end{gathered}$ | 62\% | 1.05(0.031) | 2.03 | -------- | GROWTH <br> (COVER,PER,ROCE) | DPR(BV) | NO | NO |

Source: All the numerical figures of Table are calculated from eviews6 version; Variables given in parenthesis contain negative sign
price of share in three years out of seven years, viz., 2006-07, 2010-11 and 2012-13. Growth is found to be insignificant in rest of the time period. Return on Capital Employed has shown both positive and negative association. Return on Capital Employed has shown positive association in one year viz. 2008-09. The negative association has occurred in 2006-07, 2009-10, 2011-12 and 2012-13. However, it has remained insignificant during 2006-07 and 2010-11. Cover has emerged as significant determinant of market price of share with the negative sign in nine out of the fifteen years period of study i.e., 2000-01, 2001-02, 2002-03, 2003-04, 2004-05, 2005-06, 2006-07, 2008-09 and 2012-13. Cover has appeared positive significant determinant of market price of share in 1999-2000 only. In rest of the years, this variable has been found to be insignificant. On the basis of findings of the study the Null Hypothesis (Ho) i.e. there is no significant impact of the fundamental factors on stock prices, has been rejected and Alternative Hypothesis (Ha) i.e. there is significant impact of the fundamental factors on stock prices, has been accepted.

## 5. Conclusion

Thus the above analysis concluded that in the year 2006-07, among all the independent variables DPS, EPS, Cover, ROCE and Growth are found to be significant to determine the prices of the shares in the stock market. In 2007-08, BV EPS, DPR and PER are considered as important determinants of the share prices in the stock market. While EPS, ROCE and Cover are found to be the major determinant of the share prices in the stock market in 2008-09. Among all the independent variables DPS, PER, BV and DPR are found significant to determine the prices of the shares in the stock market in 2009-10. In the year 2010-11 DPS, PER, Growth and DPR are considered as key determinant of the market share prices. In 2011-12 DPS, PER, Growth and DPR are found to be significant to determine the prices of the shares in the stock market. In the year2012-13, Growth, DPR DPS and PER are found to be significant to determine the prices of the shares in the stock market. In panel data analysis, the study results suggest that Book Value, Dividend Per Share, ROCE and PER all are being the important determinants of share prices of all selected companies from 1998-99 to 2012-13 in the whole study period.

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