

Impact of Fundamental Factors on Share Price Movements



Management

KEYWORDS : Book Value, Dividend per Share, Dividend Payout ratio, Dividend Yield, Earnings Per Share, Size of the Firm, Return on Network and P/E ratio

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ABSTRACT

The determinants of share prices are frequently a topic of debate. Economists and Investors hold different view as far as the pricing of a share is concerned. In an efficient market, share prices would be determined primarily by fundamental factors such as Dividend Per Share, Earnings Per Share, Dividend Payout ratio, Dividend Yield, Net Worth and Size of the firm etc. To estimate the future share prices, fundamental analysts use stock valuation ratios to derive a share's current fair value and estimate future value. If fair value is not equal to the current share price, fundamental analysts believe that the stock is either over or under valued and the market price will ultimately drop towards fair value. Fundamentalists do not pay attention to the advice of the random walkers and believe that markets are weak form efficient. As a result of believing that prices do not accurately reflect all available information, fundamental analysts look to capitalize on perceived price discrepancies. Understanding the impact of various fundamental variables on share price is very much helpful to investors as it will help them in taking profitable investment decisions. In the present study, an attempt has been made to study the impact of selected accounting variables on the equity prices of listed companies in Bombay Stock Exchange.

Introduction:

The importance of stock market is extensively recognized in the country's economy as an indicator of economic growth. Bombay Stock Exchange in India like other developing countries in the world acts as a crucial financial organization and plays a very vital role in the economy of India as well as increases investment. So, stock market is important in country's economic development as well as the investor's point of view. Hence it is necessary to analyze the basic factors of stock market which might influence the investor to invest his amount in the equity share prices. Investment in equity share is one of the most liquid forms of investment. Market price of the share is one the most important factor which affects investment decision of investors but market price of the share depends upon many 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. Fundamental approach predicts share price on the basis of Economic, Industrial and financial factors, whereas, technical approach takes the help of past trends in predicting future share price. The present 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 attempt has been made to find out some important determining factors which directly influence on 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.

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 found that dividend per share and book value per share influence share prices. Following Collins, there have been various attempts to identify the determinants of stock prices for different markets. The pioneering study is by Srivastava (1968) that studied the effect of retained earnings on share prices. The study report that retained earnings has no significant influence on share prices. Patell (1976) conducted a study on NYSE to examine the common stock price behavior accompanied by voluntary disclosure of corporate forecasts of Earnings per share. His result indicates that disclosures of forecasts of earnings per share were accompanied by significant price adjustments. Bhole (1980)

found earnings to be a significant factor influencing 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 their paper, 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. Dividend per share emerged as a significant determinant of share price, yield also emerged highly significant determinant with its negative association with market price of share. The coefficient of book value was positive throughout and highly significant except 1977-78. The influence of earning-price multiplier on share prices appeared to be very weak. The above discussed studies have been conducted for the foreign markets. Specifically, in the Indian market, a number of studies are available that have attempted to identify the factors that influence the share prices. In a later study, Zahir & Khanna (1982) show that share prices of private sector firms are significantly influenced by dividend and yield. Balkrishan (1984) analyzed the interrelationship in the explanatory variables, i.e. dividend per share, earning per share, book value, yield and cover with market price of share in general engineering and cotton textile industries. He used a linear regression model to study the inter-relationship of these variables and found earning per share as the most influential factor. Book value per share and dividend per share turned out to be the most significant determinants of market price in both the industries. Yield also emerged as significant determinant in cotton textile industry along with a negative sign. Krishan (1984) examined the share prices of general engineering industry and cotton textiles industry. The study found that, in both the industries, book value per share and dividend are significant factors that determine share prices. In the case of cotton textiles industry, yield was also observed to be significantly 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. He therefore stated that the famous Modigliani - Miller model that 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, book value per share, earning 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 also showed the sensitiveness of the market towards the dividend policy of the three groups. Growth showed a positive influence only in case of textile industry. Leverage in

general had a negative influence on the share prices. Chawla & Srinivasan (1987) examined the relation between share prices, dividend and retained earnings for the chemical industry. Both dividend and retained earnings were found to be significant determinants of share price. Campell and Shiller(1988) analyzed the interrelationship in the explanatory variables, i.e. dividend per share, earning per share, book value, yield and cover with market price of share in general engineering and cotton textile industries. He used a linear regression model to study the inter-relationship of these variables and found earnings-to-price ratios contribute significantly to the explanation of long-term stock price variation. Karathanassis & Philippas (1988) for banks listed on Athens stock exchange found dividends, retained earnings and size to exert a significant positive influence on share prices. Barua and Raghunathan (1990) used the Gordon's dividend growth model to show that the prevailing P/E multiples in the Indian capital market around the second and third quarter of 1990 were on the higher side. Rao and Bhole (1990) have examined the real rates of return on equities in the Indian market for the period 1953-1987. They 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 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 (1992) report dividend, earnings and yield as factors influencing prices of both more volatile and less volatile shares. Further, the study point 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 by and large efficient. Shinha (1994) argued 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 the P/E ratio to be relatively high. Vaidyanathan and Goswami (1997) examined whether the price to earnings ratio (P/E) was a good criteria on which to base investment decisions. 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, P/E ratio may not be an appropriate measure to be used for investment decisions. Mohanty (1998) found that once the PE risk and the liquidity risk was adjusted for, the book-to-market and size of the company does not had explanatory power in so far as stock return are concerned. Wayne & 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 attacking the problem at a global level, assuming integrated markets. The study presents new evidence on the relative importance of risk and mispricing effects, using monthly data for 21 national equity markets. The study found 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 explain 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 dividend/price ratio predicts real stock returns for the UK stock market, and that 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 analysis and regression analysis as the tools. The study concludes that the price behavior of b group share is determined mainly by book value per share, earning 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 significant 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. The empirical findings revealed that that prime key fundamental factors had no significant influence on the share price deviation in Pakistan. Malakar & 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, report that dividend significantly influence share prices. Sen and Ray (2003) examined the key determinants of stock price in India. 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 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. Hartono (2004) examined the impact of dividend and earnings on stock prices and found significant positive impact on equity prices if 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 showed that variables previous earnings per share, cash dividends per share, previous cash dividends per share, return on equity, 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 & Turan (2005) identified market capitalization, market price to book value ratio and price-earnings ratio as major factors influencing share prices. Nathan Taulbee (2005) measured the influences of macroeconomic indicator on the stock market in S&P 500. The result showed that 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 dividend and earning, and this relationship might directly influence that movement of share prices. 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. Singhania (2006) for manufacturing firms reported book value, dividend, dividend cover, dividend yield, earnings and price-earning ratio as significant share price determinants. Al -Tamimi (2007) in his study on UAE market identified company 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. He developed a simple regression model to measure the coefficients of correlation between the independent and dependent variables. $SP = f(EPs, DPS, OL, GDP, CPI, INT, MS)$ Where, 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. He 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) tried to relate share price with dividend per share, net asset value per share and earnings per share. AL-Omar & AL-Mutairi (2008) made a study based on Kuwaiti commercial banks and found that the variables earnings and book value per share are reported as significant share price determinants. Azhagaiah & Priya (2008) investigated the effect of dividend on share prices of organic and inorganic chemical companies. The study reported that dividend has significant influence on share prices in organic chemical companies and no influence in inorganic chemical companies. Chang *et al.* (2008) In their study on Taiwan Stock Exchange (TSEC), identified a cointegration 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 & 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 during the period from 1980 to 2004 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 on Shanghai Stock Exchange study. Their study shows that all the variables are significantly correlated with stock price in the year before crisis. However, 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 given to investor will boost up the investors to invest more in the stock as a result of which the stock prices will rise. The premium is related with the Book to Market Ratio as explained in Fama and French Model for the Portfolio Return. It was also concluded that the size of the firm also play a very important role in value of stock. As market capitalization and B/M ratio is used in Fama and French to calculate the return. Nawazish said that besides these factors the environmental and economic factors can also influence the share prices. Singhanian (2008) made a study on chemical industry and identified book value, dividend, dividend cover, dividend yield, earnings and price-earnings ratio as major factors influencing share prices. Bapat & Raithatha (2009), for manufacturing firms, found profit, size of firm and volatility as significant determinants of share prices. The present chapter attempts to fill these gaps in the literature and identify the firm specific fundamental factors that influence the share prices of Indian firms. G.R Fisher (2009) determined the relationship between British share prices and different quantitative variables. It showed the impact of dividends, undistributed profits, and company size on share prices taken from five cross-sectional samples of equities quoted on the London Stock Exchange between 1949 and 1957. Khan (2009) studied share price determinants for the firms listed on Dhaka Stock Exchange and found dividend as a factor influencing share prices. By examining the stocks of firms listed on the Nigerian Stock Exchange. 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. Somoye *et al.*(2009) used data from Nigeria and found dividend per share and earnings per share as determinants of share prices. Sunde & 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) analysed 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. Uddin (2009) analyzed the relationship of microeconomic factors with the stock price 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, earning 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 found highly positive significant relationship between market price of stock and net assetvalue 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 the following determinants: Oil prices, Gold price, Cash Reserve Ratio, Food price inflation, Call money rate, Dollar price, FDI, Foreign Portfolio Investment and Foreign Exchange Reserve. 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. The results show 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 dividend, price-earnings ratio and leverage are significant determinants of share prices for all the sectors under consideration. Moreover, profitability is found to influence share prices only in the case of auto sector. Nisa (2011) in her research on Karachi Stock Exchange used the following variable: P/E Ratio, Net Profit after Tax, Inflation, DPS, GDP and Annual Turnover as stock price determinant. 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 earning 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, so the results of the study supports liberal dividend policy and suggests companies to pay regular dividends. Sharma (2011) tries to detect relationship of stock price with 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. The results revealed that earning per share, dividend per share and book value per share has significant impact on the market price of share. Further, results of study indicated that dividend per

share and earnings per share being the strongest determinants of market price. 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 impacts the market value of an equity share in the Indian context. Khan & 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 has been randomly selected from 34 sectors of KSE. Ten years' (2000-2009) data has been collected for the sample companies. The tools used for analysis are Linear Multiple Regression and Correlation Model. It has been 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 leads to rise in share prices. B/M ratio and interest rate are negatively related to share prices. Raimony & 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. The volatility equation shows that the mean () is smaller than that of the parameter of lagged squared error term (). ARCH (1) (represented by) is positive and statistically significant at 1% level, while GARCH (1, 1), represented by , is negative with the dummy variable but not statistically significant. The sum of (+) is greater than unity, demonstrating that the volatility increases over time. The dummy variable () has an inverse influence on the ASE index returns volatility and is statistically significant at 1%. The results from the (IRFs) support the significance of dynamic association between the monthly return index and the macroeconomic variables. Nisa and Nishat (2012) used data from 221 Pakistani firms between 1995 to 2006 and found 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, namely, Heavy and Manufacturing, Pharmaceutical, Energy, IT and ITES, Infrastructure, and Banking. The panel data techniques, viz. Fixed Effects model and Random Effects model have been 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. Earnings per share and price-earnings ratio are being the crucial determinants of share prices of manufacturing, pharmaceutical sector, energy, infrastructure, and commercial banking sectors. Size is being 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 & 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 & 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 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.

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 the small sample with a limited number of variables and analyzed different type of relationships without comparing their relative performance.

Objectives

The main aim of the study is to study the relationship between stock prices and company specific intrinsic factors such as: Dividend Per Share, Earnings Per Share, Book Value, 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.

Sample size:

Selection of sampling has done in three stages 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.

Table 2.1: List of Sample companies

Name of the sector	Number of companies
Agri-Chemicals	5
Cement	5
Hotel	5
Steel	5
Total	20

STATISTICAL TOOLS: Under statistical tools, Mean, Standard Deviation, Co-efficient of Correlation and linear Multiple regression analysis are used.

Regression Analysis₃ e_i = error term

Table 1: Anova, Model Summary & Co-efficient for Each Variable (BV,SIZE,RONW) with dependant Variable (MPS)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	-57.803	55.499	--	-1.042	.299
Book Value(BV)	2.297	.100	.863	22.933	.000

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Size of the Firm(SIZE)	3.023	8.902	.013	.340	.735
Return on Net Worth(RONW)	1.973	1.032	.066	1.912	.049
R Square - Value	.770				
F - Value	218.320				
F- Sig	.000				

a. Dependent Variable: Market Price of Share (MPS)

b. Predictors: (Constant), Return on Net Worth (RONW), Book Value (BV), Size of The Firm (SIZE)

Interpretation

Regression was used to find the coefficients and Analysis of variance (ANOVA) was used in testing the hypotheses and to measure the differences and similarities between the sample companies according to their different characteristics. From the above table it is found that the R-Square which is called as coefficient of determination of the variables is 0.770. The R-Square which is also a measure of the overall fitness of the model indicates that the model is capable of explaining about 77% of the variability of the share prices of selected companies. This means that the model explains about 77% of the systematic variation in the dependent variable. That is, about 23% of the variations in MPS of the sampled companies are accounted by other factors not captured by the model. This result is complimented by the adjusted R-square of about 76.6%, which in essence is the proportion of total variance that is explained by the model.

Similarly, findings from the Fishers ratio (i.e. the F-Statistics which is a proof of the validity of the estimated model) as reflected in Table, indicates that, the F is about 218.320 and a p-value that is less than to 0.05 (P-value =0.000), this invariably suggests clearly that simultaneously the explanatory variables are significantly associated with the dependent variable. That is, they strongly determine the behavior of the market values of share prices.

However, further empirical findings provided in Table. shows that there is a significant positive relationship between BV and the MPS of the listed selected companies in Bombay Stock Exchange. This is evident in the t-statistics value of 22.933 with a P-Value 0.000 which is significant at 5% level of significance. This outcome basically implies that with all other variables held constant, an increase or a change in BV of companies, say by 1% will on the average bring about a 86.3% increase in the MPS. That is an increase in the BV of selected companies will also lead to a positive improvement in the MPS. From this it is evident that the BV of selected companies have a significant positive impact on the MPS. Hence we accept H₁.

Moreover, Table.also shows a significant positive relationship between RONW and MPS. This is evident in the t-statistics value of 1.912 and the P-Value is 0.049. This outcome basically implies that an increase in RONW will invariably bring about a significant increase in the MPS. In other words with all other variables held constant, an increase or a change in RONW of selected companies, say by 1% will on the average bring about a 6.6 % increase in the MPS. Where it is observed that, firms' book value and RONW are having a significant positive association with firm's stock price. Hence we accept H₃. Since, Book Value per share depicts the owner's 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.

Another empirical finding from the regression analysis shows a positive relationship between SIZE and MPS. This is evident in the t-statistics value of 0.340 and the P-Value is 0.735. This outcome basically implies that an increase in SIZE will variably bring about a insignificant increase in the MPS. However, this indicates that, in the study period the firm SIZE has no explanatory power towards stock price movement. Hence we do not accept H₂.

Equation 2----->

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

Where, MPS is dependent variable

a₀ = constant term

b₄, b₅, b₆, b₇, b₈ are the regression coefficients of DPS, EPS, DY, DP and P/E respectively.

e₂= error term

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.

To analyse 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 hypothesis will be framed as follows

- H₁: There is a positive relationship between DPS and MPS
 - H₂: There is a positive relationship between EPS and MPS
 - H₃: There is a negative relationship between DY and MPS
 - H₄: There is a positive relationship between DP and MPS
 - H₅: There is a positive relationship between P/E and MPS
- Hypothesis will be tested based on Regression analysis

Regression Analysis

Regression Model: $MPS = a_0 + b_4 \text{ DPS} + b_5 \text{ EPS} + b_6 \text{ DY} + b_7 \text{ DP} + b_8 \text{ P/E} + e$

Table 2: Calculation of Anova, Model Summary & Co-efficient for Each Variable (DPS, EPS, DY, DP, P/E) with dependent Variable (MPS)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	107.322	27.751		3.867	0.000
Dividend Price Share (DPS)	44.281	5.448	0.541	8.128	0.000
Earning Per Share (EPS)	4.986	0.865	0.388	5.766	0.000
Dividend Yield (DY)	-68.488	10.054	-.229	-6.812	0.000
Dividend Paid (DP)	-.212	0.766	-.014	-.276	0.783
Price to Earning Ratio (P/E)	1.172	0.746	0.079	1.570	0.118
R Square - Value	0.848				
F - Value	216.911				
F- Sig	0.000				

a. Dependent Variable: Market Price of Share(MPS)

b. Predictors: (Constant), Price to Earnings Ratio(P/E), Dividend Price Share (DPS), Dividend Yield(DY), Dividend Paid(DP), Earnings Per Share(EPS)

Interpretation

Regression was used to find the coefficients and Analysis of variance (ANOVA) was used in testing the hypotheses and to measure the differences and similarities between the sample companies according to their different characteristics. From the above table 3.44 it is found that the R-Square which is called as coefficient of determination of the variables is 0.848. The R-Square which is also a measure of the overall fitness of the model indicates that the model is capable of explaining about 84.8% of the variability of the share prices of selected companies. This means that the model explains about 84.8% of the systematic variation in the dependent variable. That is, about 15.2% of the variations in MPS of the sampled companies are accounted by other factors not captured by the model. This result is complimented by the adjusted R-square of about 84.4%, which in essence is the proportion of total variance that is explained by the model.

Similarly, findings from the Fishers ratio (i.e. the F-Statistics which is a proof of the validity of the estimated model) as reflected in Table 3.44, indicates that, the F is about 216.911 and a p-value that is less than to 0.05 (P-value =0.000), this invariably suggests clearly that simultaneously the explanatory variables are significantly associated with the dependent variable. That is, they strongly determine the behavior of the market values of share prices.

However, further empirical findings provided in Table 3.44 shows that there is a significant positive relationship between DPS and the MPS of the listed selected companies in Bombay Stock Exchange. This is evident in the t-statistics value of 8.128 with a P-Value of 0.000 which is significant at 5% level of significance. This outcome basically implies that with all other variables held constant, an increase or a change in DPS of companies, say by 1% will on the average bring about a 54.1% increase in the MPS. That is an increase in the DPS of selected companies will also lead to a positive improvement in the MPS. From this it is evident that the DPS of selected companies have a significant positive impact on the MPS. Hence we accept H_4 .

Moreover, Table 3.44 also shows a significant positive relationship between EPS and MPS. This is evident in the t-statistics value of 5.766 and the P-Value is 0.000. This outcome basically implies that an increase in EPS will invariably bring about a significant increase in the MPS. In other words with all other variables held constant, an increase or a change in EPS of selected companies, say by 1% will on the average bring about a 38.8 % increase in the MPS. Hence we accept H_5 .

Another empirical finding from the regression analysis shows a negative relationship between DY and MPS. This is evident in the t-statistics value of -6.812 and the P-Value is 0.000. This result basically means that with the influence of other variables held constant as DY changes, say by 1% on average, MPS changes by -2.29% in the opposite direction. This result further indicates that DY is a significant determinant of MPS for the sample listed companies in BSE. Hence we accept H_6 .

Finally, other variables DP and P/E have insignificant impact on MPS. However, this indicates that, in the study period the firms DP and P/E have no explanatory power toward stock price movement. Hence we do not accept H_7 and H_8 .

Conclusion

To determine the relationship between quantitative Variables and stock prices, the Pearson's correlation and multiple regression analysis are used. Based on the results of the empirical

analysis, the variables Book Value per share, Dividend Per Share, Dividend Yield, Earnings Per Share, firm SIZE and Return on Net Worth are significant determinants of stock prices for all the selected companies under consideration. Hence, the present study confirms that the study of accounting factors prove to be beneficial for the investors in Bombay Stock Exchange, as these factors possess strong explanatory power and hence, can be used to make accurate future forecasts of stock prices. Therefore, investors are suggested to take care of accounting variables of company before investing in shares.

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