CHAPTER 5

SUMMARY OF FINDINGS AND RECOMMENDATIONS

5.1 INTRODUCTION

The objective of this research is to find out the impact of changes in economic and company's specific factors on stock returns of the firms related to different sectors of the economy. For this study, a sample of 30 companies (based on their industry weightage on the index and the availability of data) were selected from NIFTY 50 and a time series of all these companies’ market prices at daily and monthly frequencies have been used. Far and wide, this thesis, endeavor to deal with the pertinent econometric issues by employing available modern econometric techniques. To this end, due emphasis has been given, wherever required, on modeling issues such as relevant specification of the conditional mean as well as of the conditional variance, and examining for the acceptability of these specifications so that conclusion on significance and insignificance are not based on misspecified models. The importance for correct specification is due to the conventional fact that any misspecification(s) may head to ambiguous conclusion about the models on returns and eventually on the result. The macro and financial variables chosen under the study were duly consulted through the earlier literature based on the emerging economies in general and for Indian context in particular. Following the recognition of the identified econometric models/estimators, the precursory modeling undertaken to arrive at a required econometric model and estimators. Using panel data techniques initial modeling undertaken for the study was based on the diagnostics available for use with the preferred model.

The study has contemplated a wide radius of econometric models and estimators, from the proportionately candid to (static pooled ordinary least square) more complex (dynamic panel analyses). These techniques were quickly discounted for practical and theoretical purposes; other techniques were also considered to get valid results further. The choices between models were based on extensive statistical analysis and expert advices. After the preliminary examination the final decision is taken in order to arrive at the preferred econometric estimator (two dynamic panel data estimators). Based on the theoretical satisfaction the Arellano - Bond estimators
is considered in favour of Blundell - Bond estimator. In the next section of this chapter researcher encapsulated the major findings of this study. This thesis concluded with few ideas for further work on the uniformity aspect of Indian stock market.

5.2 MAJOR FINDINGS

The thesis deals with studying the aspect of movement prevailing in the Indian stock market because of a change in macro and financial variables. The contention is that the major conclusions on the impact are unlikely to change since there have not been any major structural adjustments in the Indian economy during the last few years. The effect of the reforms taken recently is yet to be seen indeed. This study was brought about by the problem of omitted variables which may marginally influence the results of the research (since the ingredient to compute financial variables in the initial years of the study period were not available). Undoubtedly, like any other empirical work, computational figures may change if the length of the time series is increased. But, the likely impact of not including the most initial period would be marginal, if at all, in terms of inferences on contribution of these variables on Indian stock market.

This research examined a set of macroeconomic and microeconomic variables, including Inflation, Real effective exchange rate, Gross Domestic product, Broad money supply and a set of financial variables like Earnings, Economic value added, Dividend policy and Financial leverage and their role in explaining the fluctuations in the total returns on the stock markets. As most of the explanatory variables were found to be non-stationary, the first differences were used in the first part of the empirical analysis in chapter IV. After analyzing the initial results of the 30 sample companies, using dynamic panel data test where these variables proved to be important, several conclusions might be drawn.

This thesis is concerned with studying the impact of major macro and company specific factors on the Indian stock market, and hence the researcher has first presented some relevant facts about the Indian stock market so that India’s present position as a major emerging market economy is briefly established. Additionally, in Chapter I, some of the major structural and regulatory reforms which were introduced since India embarked on liberalizing its economy earnestly and steadily in 1992 were mentioned. The content of this chapter should be considered to
be the bare minimum exposition about the stock market of India in the post-liberalization period. In the third chapter, a study of the modeling approach that is to be followed throughout the study is carried out. This involves a linear dynamic panel models such as Fixed Effects, Random Effects, ARDL specification and Generalized Method of Moments (GMM) technique. Further, the approach also envisages appropriate specification like the diagnosis test of the final model so that the data analysis does not produce misleading inferences owing to any probable inappropriate specification.

To start with, annual frequency data for all major macro variables and financial ratios are taken into consideration for India. However, the existing studies between stock returns and such variables show a lack of uniformity in identifying the set of macro and financial variables as predictors of return. In other words, empirical evidence do not identify, most often, the same set of variables across different such studies; rather, these studies suggest varying sets some variables being common. To deal with this problem of choosing the appropriate set of macro variables and financial ratios the literature on emerging market indices in general and Indian sub continent in particular became the base. In addition to this the experts' advices were also taken to lead towards the objectives. Following this procedure, the researcher had first identified the relevant set of five macro and five company's specific variables which have been found to affect the return in other such related studies. Because of non-availability of data for some period, this work has been done with data covering a relatively shorter period which, incidentally, is a stable period with less structural break.

This research is one of the few comprehensive studies of the stock markets in the emerging economies, which looks at a set of macroeconomic and financial variables and attempts to explain most the variance in the stock market returns using various panel series test. The study employed panel data consisting of macro variables and financial time series over the period 1995-2014. The panel data techniques, such as Fixed Effects model and Random Effects model has been employed to explore the unobserved heterogeneity of panel data models in addition. The outcome of Hausman test asserted that the data fits the fixed effect estimation. Following instruction from experts an ARDL model was preferred in the current study. The outcome signified that only dividend per share is statistically noteworthy at one percent to explain the change in company's market share price. This result concludes that shareholders
attach more worth to those firms that pay consistent dividend. Rest of the variables do not advocate any significant association ship with the explained variable which was little confounding. Hence, a further examination whether explained variables has long run cointegration or not was made, using Wald coefficient test. Comparing F-Statistics with Pesaran critical value at one per cent, with unrestricted drift and no trend signified a long run associationship amongst explanatory variables. Strictly speaking, this can be inferred that the coefficients of independent variables were jointly significant to explain companies’ capital market prices.

Nonetheless, the opening analyses presented earlier that static models gives an unreasonably large parameter estimates and hence a dynamic specification is chosen. In order to see the speed of adjustment towards long run equilibrium an Error correction term (ECT) has been used to the ARDL estimates and the result reported that the whole system gets back to long run equilibrium at the speed of 17 per cent. This advanced me to the final decision enforced in order to arrive at the required econometric estimator, i.e. either Arellano - Bond or Blundell - Bond estimator. Based on the theoretical advantages Arellano - Bond estimator has been preferred in favor of the later. However, a dilemma appeared with dynamic model when a lagged explained variable were correlated with other regressor (coefficient may be biased to some extent). Therefore, in order to disclose endogeneity (with the use of internal instruments) in the data Generalized method of moment (GMM) was employed.

The GMM produces the best overall results at lag one [based on Akaike information criterion (AIC) and Final Prediction Error (FPE)] as the lagged dependent variable is significant for explained variables. Shareholder's projection of market prices based on earlier prices pattern is rational. To the expectation, Dividend per share, Economic value addition, Gross domestic product, Broad money supply and Whole sale price index signified a highly significant relation with current as well as of previous year. The above empirical findings are consistent with Clare and Thomas (1994) Mukherjee and Naka (1995) Lehn & Makhija (1997), Cheung and Ng (1998), Hassapis and Kalyvitis (2002) and Ibrahim and Aziz (2003). A negative alliance with Dividend per share may be because of the reason that investors may not be benefiting from adopting generic investment approach that takes into concomitance with the assemblage of other significant return factors. Undoubtedly, the portfolio managers and retail investors believe in long term progress of their investment. However, other avenues of information exists which can help managers to disseminate information,
but dividends are highly detectable compared to other declaration in relation to its tenability of cash indications. A positive alliance of GDP with stock prices denotes that the association is mainly credited to the acknowledgment of stock exchange participants to macroeconomic variables tight to higher/lower output, such as high/low employment, which sequentially are positively related to earnings and future business conditions. Likewise, a positive and significant affiliation with money supply indicates on the ground that money supply fluctuation have a positive impact on real economic activities or it may be because of the fact that an improvement in money supply could amplify stock prices by virtue of the liquidity effect, that is, an exposure of surplus liquidity in the economy brings down the interest rate which further raises investment in stock exchanges and consequently that brings a jump in the stock prices. A positively significant relation of Inflation with stock prices probably elucidated by the incompetence of the hedging character of the securities against Inflation. On the contrary, Chen et al. (1986), Maysami and Koh (2000), Flannery and Protopapadakis (2002) and Wongbangpo and Sharma (2002), asserts that excessive inflation normally leads to forthcoming tighter economic policies that are believed to have a negative effect on financial aggregates. A significant relation of foreign exchange rate at 90 percent confidence level can be explained by the loss in value of the domestic currency as it raises the competitiveness of the firms performing in the stock exchange market, which lead to higher stock returns.

Furthermore, Asian Crisis and the last subprime mortgage crisis can be the reason for this positive affiliation, since the demand shrinkage in Indian economy decrease the price of exports and imports and the decline in the value of the domestic currency upturn the competitiveness of the export sector. Besides all these, it is also established that EVA is also a crucial determinant of the stock return. Though it is not surprising to see that investors credence and dependence is not on the provision of dividends but enhancing further the worth of the business. Application of EVA upturn ‘internal corporate governance’ as it triggers manager to get rid of value toxic activities and to invest only in those businesses that are expected to appreciate investor's value. EVA depth for incentive compensation leads to the upturn in operating efficiency by increasing asset turnover. Yet EVA fall short to disseminate information to the participants of capital market, it could be employed to ameliorate the internal governance of the firm. In preference, a management control system shall kindle managers for ‘self control’ rather than managers are being disciplined because
human beings are generally resistant to control. Attaching incentives with EVA facilitate employees in organizing self assessment of every activity assigned to them to fortify that it also create and enhances value addition of the firm.

In consequence, results from the GMM estimation displayed the fixed effects model is misspecified; hence its estimates are prejudice. Nonetheless, it is functional because it contributes a goodness of fit measure. The GMM model apt to ensure this as more coefficients are significant and confidence levels were higher.

5.3 RECOMMENDATION

This research aims to identify the effect of change of economic and company's specific financial variables on stock returns of firms related to various industries, listed at National Stock Exchange. This study ensures the significance of the macro and company specific fundamental ratio that are essential and immensely helpful to shareholders and analysts in estimating the better collection of stocks that belong to different industry groups. Hence, the report outcome may have significant connotation for investor in their investment decision making and for national policymakers. On the ground of the outcome of the research and subsequent conclusions, following are few of the suggestions for the stakeholders of the Indian capital market and some propositions for the future work in this domain.

Albeit, stock returns are predominantly influenced by market returns at NSE, however other Economic factors have also shown some significance at the firm and industry level so both individual and institutional investors must consider these economic and financial indicators while investing at NSE. Participants are interested in forecasting the future pattern of capital market. The investor should monitor the price variation of a particular company over a period of time and should go for superior portfolio. The true position, future proceedings of the organization, statistics which can affect trading decisions etc. is indicated in financial results which is indispensable for analysis. Besides monitoring the company's performance the shareholders should study the economy and the industry as a whole. Allocating funds in companies that has a superior market worth in revenues and one should take various other attributes into account that affect the performance before investing. Nonetheless, the industry may perform well, several ratios like, financial ratios, growth ratios, sales etc. should be properly understood with respect to that firm and also with the industry. As DPS, EVA, GDP, Broad Money Supply, Exchange rate,
WPI are directly allied to current market price per share, while looking at these variables one should analyse the return and go for better portfolio. To get the credible and germane information one shall make use of available data for fundamental analysis which can prove to be beneficial in buying and selling decisions. Eventually firms operations is one of the vital components that plays an important role in price movement but one cannot deny the variation due to speculation. However, speculation makes changes for a very short term.

An increase in Gross domestic product plays a prominent role in upliftment of capital market in India. The positive relationship of Domestic Production with stock returns is an evidence for the people who pour their money in market and policymakers both. So authorities must make attempt to boost the domestic industrial production in the country which consequently enhances the stock market growth spree. It would work as an indicator to make better decision about allocation of funds in a particular industry or firm.

The value of Indian rupee against US dollar is persistently dropping over a period which is unfavorably upsetting the stock returns at NSE. Therefore Govt. authorities should take remedial action to balance the Indian currency. It will reinstates the confidence of the investors and portfolio managers and will help them to make higher quality judgments based on factual and detailed forecasting of financial affirmation. The long run favorable effect of exchange rate on NSE confirmed that for the development of stock exchange in India, (keeping in mind the elasticity of imports) exchange rate mechanism should be handled with utmost care, which may otherwise lead to instability. Therefore, a wise investor must choose for fundamental evaluation to achieve higher returns.

Money supply of India is supervised and governed by the Reserve Bank of India (RBI) as constitute of monetary policy framework. The current study offers that necessary monetary regulations shall be embraced by monetary managers to curb inflation so that any surplus in the economy may not adversely affect volatility and could play a supportive hand in minimizing it. The monetary authorities should take utmost care in deploying monetary policies to upraise security prices in the short run while consequent to negative outcome in the long run. Findings also display that earnings does not carry cue and puts a question mark about the future prospects and cash flows of the companies since earnings have an insignificant associationship with stock market price. The finding suggest that Indian firms should not give much
priority on escalating their EPS but should congregate on those firm fundamentals measures which exercise more influence on stock price fluctuation. The management of Indian firms should give more importance on enlargement and growth; this would help majorly in escalating those performance estimators that could exercise strong effect on stock price movement. Regulating bodies should also strengthen efforts to do away with all forms of inconsistencies that would make firm functional in National Stock Exchange to become incalculable by financiers and researchers. This can only be attained when Indian firms vouchsafe their actual EPS. The outcome provides a space to diversify risk in Indian capital market. At large, the stock returns of all the industries perform differently in identical economic conditions therefore, the investors should scrutinize the behaviour of industry allocation their asset allocation. The findings can help in broadening the risk return trade off for the potential investors as well as discounting economic risk. In addition, macroeconomic guidelines can become a advance tools for the investors to influence expected risk premium and inconsistency in stock return.

All in all, Indian markets are compressing under competitive pressure and hence, it requires extensive consolidation and frames a inspirational festivity of the forgotten years. The journey towards advancing expansion of the domestic stock market is tempting and worthwhile. There is a need of firm commitment by the appropriate authorities to reform the financial network of the country so that a substantial and enduring outcome can be sustained. Governing bodies must operate like a magistrate to supervise the conduct of the market and to take suitable remedial measures for the effortless and uncomplicated operation of the system when and where it is required. This conduct should be persistent in order to make India's capital market the best performing market of the region. Moreover, To recuperate the potency of the monetary policy, execution is necessary for better corporate governance. On this subject, accountability should be made clear in advance to reinforce coordination among various regulatory bodies comprising Reserve Bank of India.

5.4 SCOPE FOR FUTURE WORK

In this study, the composition of a dynamic model with linear conditional heteroscedasticity is used. However, there is a growing literature on nonlinear time
series models that can be probably appropriate for modeling and prognosticating economic and financial variables. Since, the study has been attempted with the annual time series of data of domestic factors only, the models and result could have been made more resilient and unambiguous with monthly or weekly frequencies ancillary with the global external forces in general and of US in particular as any Asian stock market index is majorly affected by the alteration in US market.

These specifications may be used to study the prognosticating effect over Indian stock returns first without giving consideration to volatility and then with different models for volatility. Juxtaposition across different models may be carried out using out-of-sample forecasting estimates including recently advanced tests of predictability.

Future outlook of the research study is open for preceding with a wide gamut of different relevant variables such elements of income statement and cash flow statement variable along with EVA and MVA. Besides raising number of variables an enlargement in the sample size shall be made to other listed companies to further underpin the findings in order to conclude the results if possible from the extended research. The multifactor model of this study comprises of four macroeconomic variables and five company's financial variable. This list can be further enhanced by using the data of certain other indicators, which is not currently available. This can be made possible with the advancement of the stock market that will help to obtain monthly data on various economic variables. It is expected that data will be made available by organizations like the Central Statistical Organization Reserve Bank of India, SEBI, and NSE/BSE etc. Such data may include lending and deposit volumes, Banking development and discount rate etc. Although some non-priced variables do not contribute to the expected return on securities, they help to explain volatility of stock returns and provide managers with a mechanism to evaluate the diversification of portfolios. This may require going beyond the conventional multi factor approach of including macro and micro factors. This will involve factors like, measures of the legal environment, measures of corporate governance and measure of
shareholders' rights. Issues of corporate governance and investor protection also measure the important relationship.

Another dimension of future research work could be in the domain of volatility modeling used for characterizing volatility in returns. During the last couple of years many specification for volatility mainly semi parametric and non-parametric had come into existence in the literature. Earlier developments on volatility modeling were parametric, but the recent literature has advanced towards semi-parametric and even fully nonparametric route. The parametric course count on inhibited operating form assumption about the volatility undertaken for consideration. It would for that reason be an interesting endeavor to study forecast ability of Indian stock return by applying these newly advanced conditional volatility models and compare their appropriateness and effectiveness with those of parametric models for volatility. An attempt that would take an account of data revisions by using real-time data when forming a portfolio. Thus it would be both interesting and challenging in future research to examine predictability of Indian capital return using macroeconomic and financial variable of company specific in real time. It would also be fascinating to test whether certain macroeconomic and/or company specific attributes discharge significantly better result in the Indian capital market if one permit for time varying effects of these variables on stock returns. For example, this would allow the time varying change of these variables on returns to change across various phases of the trade cycle.

Conceptually, the explanatory subject in return statistics, or for that matter in any financial information (that could be utilized for producing well founded forecasts) it is not uniformly distributed over the experiment. Strictly speaking, some data points are more significant than others in the sense that their influence is comparatively simply collected and then they can serve a fruitful basis for producing significant effect. Practically, this would indicate that even though model is appropriately specified for all observations, it is applied only inconsistently. Introduction of such pragmatic specification as well as other well known and not so known empirical proves into fundamental and empirical models appear to be a provocation for the future work.
India is believed to be one of the most prominent and consumable emerging economies with an enormous potential for future inherent growth. Certainly companies concerning various significant economic, and company specific analysis would continue to grow. Limiting the study into the equity aspect of the Indian capital market the present thesis reported some ideas towards future study on the India capital market.