CHAPTER VII

SUMMARY AND CONCLUSIONS

During the past two decades, political and economic events in India have witnessed an exciting transfiguration. However, with the emergence of real-time media as a round-the-clock newsmaker and news-breaker, these spectacles have now become commonplace to read in the financial pages. In fact, as it is difficult to keep economics and politics separated and insulted from each other, instability, uncertainty and flux in the wake of socio-political-economic occurrences are, no doubt, likely to affect business confidence adversely as well as the market sentiments. Consequentially, as these new information hit the market, investors revise their probability distributions of the resulting economic effects and react accordingly to bring stock prices to their new fundamental values. The sooner they recognise the impact of these tips, quicker they will arm themselves with necessary tools to revise and rebalance their asset positions accordingly. Predicting the extent of stock market reaction to a piece of news although seems intricate and inexplicable, but studying its historical prices and performances will possibly be helpful for intelligently anticipating the future prices and patterns in the wake of new information and to reap benefit of excess returns.

In India, as a result, much time and effort have been devoted in the field of finance to investigate the behaviour, but mostly directed to examine the effects of company-specific pieces of information and macroeconomic data releases on the equity prices. The study, therefore, intends to fill up the voids in the existing literature by investigating stock market reaction to major national political and economic events in India using ARCH/GARCH class of models.

In the first chapter, attempts have been made to introduce the topic and to make an in-depth review of literature on the related aspects. On the basis of the same, vacuum in the existing research works has been identified and the objectives of the study are identified. Data and broad methodology for the study are also discussed in this chapter.

The second chapter explores the contribution of socio-political and economic events on the evolution of Indian stock market. For this, a rapid survey of the growth and development of stock exchanges in India has been carried out and at the same time the
course of major political and economic events in this respect are traced out. The historical survey of the growth and development of the Indian stock exchange thus points to three major conclusions.

First, like other countries, the development of stock exchanges has been closely associated in this country with the progress of the joint-stock form of organisation. This development of joint-stock enterprises on a large scale, however, would become impossible had the facilities provided by stock exchanges for the transfer of shares and securities did not exist and vice versa. Secondly, socio-political and economic events were indeed indispensible for the evolution of the Indian stock market. From time to time, these events had greatly influenced the momentum of the Indian business activities and thereby ushered in the way for new stock exchanges and increased stock market participations. And lastly, it is the unbridled speculation that too played a dominant role in the maturation of the Indian stock market. In fact, in the absence of proper code of stock exchange practices, crisis was rampant at that time and raised questions about the utility and very existence of the stock exchanges. But, the various committees that had been appointed in India to inquire into the workings of the stock exchanges, all clearly have recognised the indispensability of a regulated stock exchange for the growth of an economy. And pointed out that the control of speculation, no doubt, is the essence of stock exchange regulation but the crux of the control of speculation is its confinement to the right sphere, to the right persons and to the right type and volume of operations (Gorwala Committee, 1951). Thus, every time the market witnessed a boom, it ultimately busted with a note of interrogation on its practices. As a result, enquiry committees were frequently appointed, that ultimately led to the refinement and proliferation of stock exchange activities in India.

The third chapter starts with an overview of the theoretical foundations of the stock market efficiency and then attempts to study the impact of some major political and economic events on the prices of Indian stock market prior to 1995, more specifically over the period 1979 to 1994. For this, few handpicked political and economic events of major consequences including the union budgets and general elections that occurred over the period have been considered to analyse the impact thereof on the BSE Sensex as a proxy for the Indian stock market movements. The chapter broadly concludes that prior to 1995, when everything else was in a place, the market during the period had reacted positively to a change in government, irrespective of the colour of the regime. Looking at
the pre-budget rally coupled with the post-budget surprises (though not immediately), stock market reaction to the union budgets over the period seems to be efficient in digesting a sizeable amount of information prior to budget dates (strong-form efficiency) and rest thereafter (semi-strong form efficiency). In addition, stock market is found to be extremely overreacting following certain unanticipated political and economic events and underreacting following few others and thereby indicating lack of informational efficiency of the market movements over the period 1979 to 1994.

The subsequent two chapters, chapter IV and V, examine the impact of major national political and economic events on Indian share prices over the period starting from November 1995 to June 2010. While, in chapter IV, two important scheduled events, viz. Parliamentary elections and union budgets, have been looked at to generalize their impact on the movements of Indian stock market, in chapter V, some major unanticipated political and economic events are considered to assess their impact on the stock market’s risk and returns. Major findings and issues that have arisen out of the examination of the impact of these events over the period November 1995 to June 2010 are reported in chapter VI. Broad conclusions that emerge from the findings are as follows:

1. Indian stock market, in general, has a higher probability of earning positive returns. However, daily returns are, by and large, non-normal, outlier-prone and show evidence of strong autocorrelation. Daily returns of the Indian equity market exhibit conditional heteroskedasticity, that is the return variance is not constant rather time-variant. This phenomenon of time-varying volatility (volatility clustering) implies that, in India, large changes in the returns tend to be followed by large changes and small changes by small changes. Correlations between the returns of Indian stock market and that of other economies are quite significant. These correlations, however, have improved greatly during the last decade. Furthermore, correlations of the Indian market returns seem to be higher with that of the emerging markets in comparison to the developed markets like US.

2. In the Indian context, within the class of conditional volatility processes, asymmetric model, by and large, fit much better by virtue of yielding the lowest values of the AIC and SBC statistics and highest value of log-likelihood value. This indicates that, in India, the conditional variance is usually an asymmetric function
of the past innovations, i.e. increasing more at the arrival of bad news than the good news, in general.

3. World market information seem to play an important role in explaining return variation of the Indian stock market. Significant spillovers, both in terms of return and volatility, from the world market to India advocates strong global linkage of our market with the international capital markets.

4. In India, investors are not generally compensated in the form of higher risk premium, rather in some cases; they are penalized for taking higher stock market risk.

5. Analysing behaviour of the Indian stock market around the dates of election outcome over the period November 1995 to June 2010, we find that Parliamentary elections in India do have significant impact on the mean and variance of the Indian equity market, more specifically during the pre-election period. In fact, during the two-week period prior to the election outcome, stock market usually comes with strong positive excess returns possibly on the back of resolution of outcome-related uncertainties as the result date draws nearer. But, as the likelihood of future election winner becomes certain, market anxiety on the expectations of future macroeconomic policy changes gives rise to market volatility and thus stylizes pre-election period with higher amount of uncertainty-induced excess returns. In contrast, however, following an early election that held earlier than scheduled 5 year tenure, a strong negative market reaction is expected during the period leading up to result declaration dates.

6. During the post-election period, however, behaviour of the Indian equity prices is found largely driven by the quality of the election outcome. While change in political power, i.e. loss of the incumbent government ordinarily casts significantly negative impact on the post-election stock market returns, verdict of hung parliament, on the other hand, generally brings in significantly positive strike thereon. Former reaction though is very much expected on the back of increased market anxiety following uncertainty regarding future macroeconomic policy changes under the aegis of new government; the latter behaviour seems a bit confounding.
7. By and large, our study lends no support for the hypothesis of political manipulation of policy outcomes in India in view of upcoming elections and confirms existence of no election cycle in India. We also cannot attest the alignment of stock market cycle to the timing of elections in India. Thus it can be concluded that state of economic condition is no way related to the year of election in India, and thereby exerts no impact on the stock market performance as well.

8. Investigating price behaviour around the dates of union budgets in India over the period from November 1995 to June 2010, we conclude that budgets, in general, though do not have any recognizable impact on the return of the Indian equity market, but do bear upon fluctuations of the pre as well as the post-budget stock market returns to a significant extent. Union budgets in India thereby seem to be more of a volatility generating event with no comparable excess returns to equity investors.

9. Even so, while the favourable budgets do not have a decisive influence on the response of post-budget market movements, the unfavourable budgets do. If a budget initially is believed to be unfavourable for the market as a whole, it typically brings forth significantly excess negative return over the post-budget 30-day period.

10. There is a positive market reaction in the period leading up to the dates of interim budgets, but this ebullience fails to persist through the post-budget period possibly due to upsetting interim budgets. We thus conclude absence of election-time manipulation of policy outcomes through budget releases as well.

11. The unexpected political and economic events are usually found to have significant impact on the risk and return of the market. On the whole, optimistic and pessimistic both the events lead investors to revise their expectations of future returns from the Indian equity market and that too quite instantaneously. Furthermore, we do not reckon the possibility that different firms across the different sectors or with varying degree of FII-ownership percentages respond differently from that of the average market reactions. Findings thus evidence presence of no efficiency anomaly in the daily returns; rather advocate semi-strong form of efficiency of the Indian market following both unanticipated good and bad political and economic upshots. However, in case of cement, IT and automobile
stocks, upward or downward revision in the first day's reactions can be noticed following favourable events only implying presence of slow learning effect (overreaction or underreaction) in their price behaviour to certain extent following favourable political and economic events.

12. Extreme negative reactions in the wake of unfavourable political and economic events are expected to be followed by significant reversals. This phenomenon of overreaction following extreme unfavourable events is rather pervasive across the firms with varying degree of market risk and across the different industries. However, in case of low-beta stocks and stocks of few industries, viz. FMCG, IT, pharmaceutical and cement, extreme positive reactions as well are supposed to be followed by significant reversals. The results, thus, raise doubt about the efficiency of the Indian stock market on the back of some intense political and economic occurrences.

13. Optimistic events are generally found to have insignificant impact on the conditional volatility of the equity returns in India. On the other hand, considering statistically significant positive coefficient of 'Pes' in almost all cases, pessimistic political and economic events can ordinarily be concluded as significant contributor of increased time varying risk of the Indian equity returns. Extreme pessimistic events too seem to aggravate market uncertainty but of greater magnitude.

**Implications for the investors**

The present study and its empirical findings would be useful to investors as it provides evidences of stock market mean and volatility, specifically in the wake of select major national political and economic events.

It is established that unanticipated optimistic as well as pessimistic events lead investors to revise their expectations of future returns from the Indian equity market. But as in most of the cases reactions are fairly efficient and instantaneous followed by no such subsequent price reversal or revision, profitable trading strategies are perhaps not possible in those days. However, profitable trading strategies can be designed by investors by exploiting across the board overreaction following extreme negative price formations in the wake of unfavourable political and economic events. In this context, investors should take cognizance of the increased time varying risk of the Indian equity
market following extreme pessimistic events. In addition, extreme positive reactions may also prove to be profitable in case of low-beta as well as FMCG, IT, pharmaceutical and cement stocks.

Budgets, in general, though do not have any recognizable impact on the return of the Indian equity market, but do bear upon fluctuations of the pre as well as the post-budget stock market returns to a significant extent. Furthermore, unfavourable budget is generally expected to bring forth strong negative return over the post-budget period. Union budgets in India thereby seem to be more of a volatility generating event with no comparable excess returns to equity investors. The investors need to take cognizance of this fact before investing around the presentation of the Indian union budgets. However, excess positive market return may be earned in the period leading up to the dates of interim budgets only, but not thereafter. The investors should, therefore, book profits by the dates of interim budget presentations.

Strong positive price changes during the pre-election period in India are also accompanied by higher degree of market uncertainty. An investor should therefore consider trading before the dates of election results only if he can bear the heightened risk. Even so, it is better for the investors to book profit before the election results are announced. The investors should also be aware of the fact that post-election period characterised with new government (change in political power) usually generates negative returns.

Considering significant spillovers of return and volatility from the world market to India, investors are also suggested to take cognizance of global shocks and occurrences before making investments decisions and decisions regarding diversifying international portfolio. They are also advised to take moderate level of risk, because Indian market does not reward for taking high risk.

Implications for the policy makers

Policy makers as well cannot ignore the likely impact of major Indian political and economic events on share prices for the related policy formation and implementation. In fact, the implications for investors presented above are also important for the stock exchange administrators and policy makers. Considering excessive volatility around the budgets dates as well as following unexpected negative events, the surveillance system around and following these events should be stricter to keep the volatility under check.
Policy maker must also be aware of the comparatively higher volatility of high-FII stocks in the wake of negative news. NSE although has launched, India VIX, a volatility index based on the NIFTY Index Option prices, but not yet come out with derivatives based on India VIX. With this some volatility trading strategies can be set to hedge and exploit apparent pattern of increased uncertainty in the wake of select political and economic events.

Moreover, in view of the absence of barriers to trans-national capital flows, significant linkages of our market with that of the world market, both in terms of return spillover and shock transmission, *per se* is not unnatural. Rather policy makers should take cognizance of the fact that strong linkage has lowered the degree of insulation of the India stock markets from external shocks and increased the importance of global factors for framing national macro-economic plans and policies.

**Future scope of Research**

The subject of stock price behaviour has been extensively studied in Indian and abroad. Even so, most of the studies concerning effect of political and economic events on share prices have been conducted either in the context of developed countries or a very selected list of emerging economies. Not much work has been done to empirically test the effects of national political and economic events on the Indian stock market and hence, is chosen to be the subject matter of the research work to fill up the voids in the existing literature. However, there are a number of avenues for future research on the topic. Some of them are identified in the following paragraphs.

Besides the general elections and union budgets, the study has also investigated the stock market reactions to major unanticipated political and economic events in India spanning over November 1995 to June 2010 using daily closing prices of BSE Sensex and 82 select large India companies and broadly found significant price reactions on the very first day with no subsequent adjustment in most cases, but following some extreme cases only. With the high frequency trading data (intra-day prices), research can be done to test instantaneous price formation in the Indian stock market following these events after identifying exact timing of the event-related news arrival into the market.

The present study, in order to throw light on the stock specific reaction differences, has also examined the impact of unanticipated political and economic events across the
industries and also on two other firm-specific stylized information, viz. firm level market risk and FII-ownership percentage. Future research can be directed to consider some other firm-specific characteristics like market to book value ratio, price-earnings ratio, firm size, etc.

The study can further be extended to explore the impact of the major world events as well on the mean and volatility behaviour of the Indian stock markets. In addition, impact of national and international political and economic occurrences on the daily or intra-day price formation could also be studied on some other markets like derivative market, foreign exchange market, etc.