CHAPTER-8

Conclusive Observations and Policy Prescriptions

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8.1 Concluding Observations

Stock markets, despite all the criticism levelled against them, specially with regard to their inability to represent the real economy, are an inalienable part of the economy of any country. With the passage of time public involvement in the stock market transactions has only increased manifold, and this is only going to become a bigger reality as we move towards the future. From a place where brokers and moneyed individuals got together to complete transactions in company stock and other securities, stock markets have metamorphosed into a means of funnelling the savings of ordinary investors into gainful avenues. The modern stock exchange has taken up additional roles like functioning as a clearing house for transactions, supporting futures transactions, even facilitating paperless transactions. With further progress in technology and development of newer tools for financing the capital requirements, stock markets appear primed for an exciting future ahead.

With a plethora of transactions of varying complexity taking place on the stock exchange at any point of time, it becomes essential to have some means of making sense of this apparent chaos. While an ordinary individual would prefer a way of deciphering the complicated web of transactions so as to get a feel of the how the market is performing at a specific point in time, the seasoned investor would prefer to have instantaneous access to information that enables him to take judicious investment decisions. Both these categories of apparently conflicting demands are satisfied by the stock market index. Like any statistical index, stock market index is basically a comparison of any two states of the stock market at two different points of time. However, instead of merely offering such comparative information, a stock index is expected to provide inputs that allow investors, whether of the active or passive variety, to take decisions that help them to take decisions so as to maximise returns on their portfolios. In addition, stock indices should be constructed in such a way that they provide a broad coverage of stocks across the market. At its most basic level, the index should be able to filter out the ‘noise’ component of market news, so that only the truly relevant information can be reflected through the index.
Among the stock indices covered by the present work, we have started with the indices on the BSE and the NSE, not only because these are two leading and widely followed Indian exchanges, but also because they provide a bedrock for the analytic investigations in this work. In addition, for the purpose of these investigations we have also involved international indices like the Dow Jones Industrial Average (DJIA) and the NASDAQ Composite from the USA, the DAX from Germany, the FTSE 100 from the UK, the Nikkei 225 from Japan, the Hang Seng from Hong Kong and S&P/TSX Composite from Canada.

A major portion of the investigations in this work have centred on looking into the relationships among indices. In all such comparisons we have followed a common template. First the data series involved were tested for non-stationarity using the Augmented Dickey Fuller (ADF) test. Once it was ascertained that all the concerned series are non-stationary, we proceeded for cointegration analysis using the Johansen procedure. Since cointegration alone is not sufficient for determining the relationship among variables, we took help of the Granger Causality Test to decipher the extent to which one variable influences the others.

The analytic portion has been divided into three sections. In the first section we studied the relationship between primary indices and sectoral scrips of the BSE and the NSE. In both cases we have found that the primary index influences, as well as is influenced by the sectoral scrips. It was also found that whether the individual scrips affect the primary index depends to a large extent on how those scrips perform relative to other scrips; the conclusion is that those scrips that perform better than others will tend to influence the relevant primary index. Similar trends were also witnessed when industry-based groupings of indices were taken into consideration; here those sectors that displayed superior performance were found to be more likely to influence the movements of the primary index.

The second section of the analysis focussed on the relationship between the Sensex and the seven leading international indices (mentioned above). It was found that the Sensex is affected by all leading international indices. The opposite, however, does not hold true, i.e., the Sensex does not have a major influence on these international indices. We also attempted to enquire into whether geographical groupings of the
indices tended to play a role in how the other indices were influenced; no such differences in influence was found.

The third and last section of the analysis threw some light on a different area. It tried to draw a relation between stock markets and the commodity markets. For this purpose we tried to examine the movements of the Sensex on the one hand and those of the international crude oil and gold prices on the other, adhering to the same methodology as before. The conclusion was that all three data series influenced one another. Apart from this it was also found that there was two-way causality between the Sensex and the commodity group consisting of crude oil and gold taken together.

8.2 Policy Prescriptions

Based on the observations made in the course of this work and the insights gained during the analysis involved, certain suggestions can be put forward. Some directions emerge from a general consideration of stock index attributes and as such are already kept in mind during the construction of modern indices. For example it has been observed that the more diversified an index the better is its ability to reflect the depths of the market. At the same time, however, it has to be borne in mind that there are limits to the extent of such diversification, as inclusion of too many scrips in index calculation may result in dilution of the ability of the index to reflect market news truthfully. Again, proper representation of market events and individual stock or company performance requires that only those shares that are actually available for trade in the market should enter into index calculations. Towards that end, the free float methodology appears to be highly logical. While several of the leading stock indices have adopted this methodology there is a strong case for both new and other existing stock indices to follow suit.

As far as the results from the analysis are concerned, it was found that in case of Indian indices like the Sensex and the Nifty, the strong performers among the constituent scrips have a greater impact on the index movements, with the other scrips hardly leaving any impression. On the basis of this impression it may be suggested that the indices should be constructed in such a way as to include more of such true performers while phasing out the marginal players. That way it may be possible to reduce the lack of congruence between the index and its component scrips.
The next comparison between the performance of the Sensex and the international indices revealed that while the latter had a profound effect on the former, the reverse does not hold true. This suggests that at a time when we as a country take pride in the emergence of India as a possible economic powerhouse after China, a lot more may need to be done on the ground in order to make that dream a reality. We take pride when a special symbol is created for depicting the Rupee (supposedly at par with internationally renowned currencies like the Dollar, Yen and Pound Sterling) – an occurrence that is entirely of symbolic significance – yet what is supposed to be our bellwether index, the so-called ‘barometer of the economy’, hardly stands up to scrutiny as it is apparently bypassed by the leading indices of the world. The time may have come for the powers that be to rectify this situation through appropriate steps.

The third part of the preceding analysis showed that the Sensex and the commodity series pertaining to gold and crude oil demonstrate a mutual effect. Consequently any change in the value of a commodity may reflect itself through a corresponding change in the value of the stock index. Taking this into consideration it may be prudent to design such indices in a way that on an overall basis a harmonious influence is exercised by different commodities so that a particular commodity does not cause a sudden spike in index values.

One of the common criticisms against indices like the Sensex is that these are heavily influenced by FII (Foreign Institutional Investors) activity. Whenever FIIs withdraw large amounts of money from the share markets there is an invariable slump in the index values, and vice versa. Thus there appears to be an unhealthy dominance of FII-based news on the index. The solution that apparently suggests itself is that the index construction should be able to reflect every piece of market news with due importance without allowing one or more aspects to absorb more importance compared to others. Naturally it follows that both domestic factors and international events should influence the index in proportion to their respective significance for the markets.

8.3 Limitations of the Study and Scope of Further Research

No research work can claim to be complete and exhaustive. The present work has been limited by constraints of time and data availability. We have limited ourselves to examining the broad questions delineated earlier from an Indian perspective. It could
be worthwhile to examine whether the observations can be extended to other markets across the world.

Owing to paucity of time we chose only two representatives from the commodities markets, viz. – oil and gold. A more comprehensive coverage of the other important segments of the commodity world could provide a better idea about the interrelationship between the stock and commodity markets.

There were some aspects that were initially envisaged to be part of this work but could not be addressed. One of these was to study how stock index values were influenced by events like stock market crashes. This could be observed at two levels, viz., - how have the Indian stock markets reacted to instances of such crashes, and whether there is any divergence in the responses of different markets in different countries to such occurrences.

The period chosen for this study coincides with a time when Indian markets have witnessed unprecedented growth. It could be useful to extend the study to more recent times where both domestic and international markets have been passing through some really difficult times.

Lastly we have utilised only three statistical tools for the analytic part of this work. Considering the plethora of such tools and the constant evolution of newer and better techniques, it would be interesting to reassess the central questions of this work using alternative tools of analysis.