CHAPTER 3

RESEARCH FRAMEWORK

3.1 RESEARCH GAP

1. Though there are many studies undertaken on Foreign Institutional Investors, almost all the studies are specific and pertaining to one single issue, such as, behavioral relationship between FIIs and Stock market or Determinants of FII flows or Do FIIs cause higher volatility in stock market? etc. However, none of the studies undertaken by the researcher has given a comprehensive picture of FII investments in India. The present study endeavors to give a broader attention to FII investments in India by analyzing the same from various dimensions.

2. Most of the studies undertaken to find out the existing relationship between the FIIs investment flows and Indian stock market have invariably used BSE SENSEX index as a representative of Indian stock market. This study uses NSE NIFTY 50 as representation of Indian stock market. The reasons for using the index of NSE rather than BSE are; First, NSE has 84.1% of the total cash segment turnover in India compared to BSE’s 15.6%. Second, FIIs are more active with 22.9% share of total cash segment turnover in NSE whereas FIIs registered only 4.8% share of BSE’s cash market segment (Source: SEBI annual report, 2013-14).

3. Almost all the studies reviewed by the researcher covered longer time duration comprising different stock market trends but studied as a whole.
This fails to capture the possible varying relationship if any between the variables over different market trend. This study is unique as it divides the entire duration into six different phases based on market trend and studies the relationship between FII investments and Nifty returns in each market trend. However, for studying determinants and volatility, the study considers the entire period as a whole.

4. Most of the previous studies consider only host country’s (country which receives investment) Macroeconomic and Stock-market variables as a decisive factor in FII investment flows in to the country. However in reality, the changes in macroeconomic and Stock-market variables of host country alone may not determine the FII flows, as changes in the home country (country which makes investment) variables also may cause shift in investment. Few studies only have considered both host country and home country variables to find out the determinants of FII flows. This study is one among the few studies which consider both the host country and home country macroeconomic and stock market variables.

3.2 PROBLEM STATEMENT

FIIs are often pointed as a reason behind every significant bull and bear trend of Indian stock market. Following the substantial fall in Indian equity market in the year 2008 due to global recession, worries have been expressed again about promoting foreign investments, in particular, FIIs in the Indian equity market as they withdrawn their huge money from the market without any notice causing panic in market sentiments. It is also believed, though FIIs bring huge investments they are not the only influencer of the Indian stock market. It is always a sizzling debate that, do FIIs influence the stock market performance or do the stock market returns influence the FII flows. This leads to the question, whether FIIs are the market makers or
followers and motivates the researcher to find the existence of possible cause and effect relationship between FII's and stock market.

It is also noted that FII’s do not make their investments uniformly among various countries across the world. As the global economies are more and more integrating, the impact of global economic and stock market variables cannot be ignored on FII's investment decision in India. It is very well accepted fact that FII's invest in fast developing economies with good economic fundamentals. In such case, it is important to know the key macroeconomic attributes which are considered by FII's before making an investment decision in a country.

Any rapid growth beyond normal will always come with its by-product. This may be true of the Indian stock market too. The abnormal FII investment inflows and outflows to Indian stock market may create a highly volatile and uncertain market. Chittedi (2008) identified FII's are significant factor in generating the liquidity and volatility in stock market prices. However this is contrasted with the study of Bansal & Pasricha (2009) as they found volatility is significantly reduced with FII investment flows. The fast shift in the trends affects the confidence of the individual investors as he/she feels left-out in the contest. This prompts the researcher to find whether FII investments create any volatility in Indian stock market.

Small investors invest their hard earned money in stocks with the expectation of getting good returns from their investment. Investing in stock market exposes the investors to market risk. The institutional investors like mutual funds, insurance companies and hedge funds are equipped with better research knowledge and techniques apart from getting the first-hand market information which helps them to adapt to the situation very quickly and thereby safeguarding their investment from the adverse movement of the
stock market. Whereas, small investors are always laggards in knowing the market information and they do lack sophisticated tools and techniques used to forecast the FII flows and market movement. It is very well noted and discussed in the existing literature that FII’s current investment followed market trend and its own past investment trend. This particular fact encourages the researcher in exploring the possibility of forecasting the FII investments based on Nifty returns and its own lags. Forecasting the FII investment flows may provide effective input to the policy makers and small investors as this helps them to understand investment views of FIIs and decide their strategies accordingly. If a high degree of concurrent relationship is found between FIIs and stock market, forecasting FIIs proves to be yet another way to predict the stock market movements and sentiments.

3.3 RESEARCH QUESTIONS

The above stated research problems motivate the researcher to study the larger picture of FIIs in Indian stock market by framing the following research questions:

1. How the FIIs are associated with Indian equity market and what is the nature of relationship, if any, between FII investment flows and stock market movements?

2. What macroeconomic and stock market variables induce FIIs to make investment in Indian stock market?

3. Do FII trades create any significant volatility in the Indian stock market and thereby causing more risk for small investors and the companies in having stable valuation?

4. Whether the FII investment flows can be predicted using any financial forecasting model with reasonable accuracy?
3.4 OBJECTIVES OF THE STUDY

Bearing in mind the existing literature reviews and the statement of problem, the following objectives are framed for the study:

1. To examine the existence and nature of relationship if any, between FII investment flows and Indian stock market.

2. To identify the macroeconomic and stock market determinants of FII investment flows in both long-run and short-run.

3. To explore the fact whether FII investment flows create volatility in the Indian stock market or not.

4. To forecast FII investment flows in the Indian stock market and suggest a better model for forecasting the same.

3.5 RESEARCH HYPOTHESIS

The following are the research hypotheses that are proposed and tested based on the above conceptual framework to discover the linkage between FII investments and Indian stock market:

1. No significant correlation between FII investments, Macroeconomic variables and Stock market variables.

2. No significant Granger cause relationship between FII investments and Stock market returns.

3. No significant long-run macroeconomic and stock market determinants of FII investments.

4. No significant short-run macroeconomic and stock market determinants of FII investments.

5. FIIs do not create significant volatility in Indian Stock Market.
3.6 SCOPE OF THE STUDY

The scope of this research study is limited to FIIs investment flows in India and Indian stock market. Though the stock market has two segments namely, Cash segment and Derivative (Futures &Options) segment, the study is restricted only to the Cash segment of stock market. Despite the fact that this research is intended to give a broader insight on FIIs in Indian stock market, it is not a complete treatise as there is scope for further research in this avenue from other perspectives.

3.7 RESEARCH METHODOLOGY

Research methodology refers to the overall approaches and perspectives to the research process as a whole. This section discusses in detail about the research design, sampling design, research strategy, research paradigm, data types and data collection involved in this research.

3.7.1 Research Philosophies

There are essentially two main research philosophies although there can be overlap between the two and both philosophies may be identifiable in any research project. They are (1) Positivistic (2) Phenomenological.

Positivistic approaches seek to identify, measure and evaluate any phenomena and to provide rational explanation to it. This explanation will attempt to establish causal links and relationships between the different elements (variables) of the subject and relate them to a particular theory or practice. Positivistic approaches are also called as ‘Quantitative’ or ‘Objectivist’. Positivistic includes the methodologies like Surveys, Experimental studies, Longitudinal studies, Cross-sectional studies etc.
Phenomenological approaches are particularly concerned with understanding behaviour from the participants’ own subjective frames of reference. They are not always observable or measurable and as a result can become hard to generalize. Phenomenological approaches are also referred as ‘Qualitative’ or ‘Subjectivist’. Phenomenological approach includes the methodologies like Case Studies, Action Research, Participant observation etc.

Research paradigm adapted in this study is Positivistic. Positivistic can also be termed as quantitative research.

3.7.2 Research Design

The research design is the blueprint of entire research. It provides overall structure or framework and also gives direction to the entire research. There are two types of research designs: exploratory and conclusive designs. Exploratory designs are mostly qualitative in nature and undertaken when few or no previous studies exist. The aim is to look for hypotheses or ideas that can be tested and will form the basis for future research. On the other hand, Conclusive designs are mostly quantitative in nature and tests the framed hypotheses to draw a certain conclusion. This study makes use of Conclusive research.

3.7.3 Research Method

This research applies quantitative form of Empirical research method. Empirical research methods are the class of research methods in which empirical observations or data are collected in order to answer particular research questions. Empirical research normally starts with some a priori theory, which the researcher develops to explain or predict what happens in the real world. The purpose of the research is to test the theory
and possibly refine it. The quantitative form of empirical research method uses statistical or econometric methods (in case of time series data) to identify the patterns and relationships in the data.

### 3.7.4 Sampling Design

Sampling design is a process by which information or data will be collected from huge population (Clark & Adle 2010). The researcher uses selective sampling method for selecting the stock indices and FII determining variables. Stock indices CNX NIFTY and S&P CNX 500 are used for the study as they are better representatives of India stock market with relation to FII investments.

Regarding the FII determinants, there are host of factors which affects the FIIs investment in Indian equity market. These factors include both international and domestic determinants. The international determinants of FIIs investment in Indian equity market include: economic growth, inflation, stock market returns, stock market risk, international crisis etc. Domestic determinants include: political stability, corporate governance practices, macroeconomic factors, market returns & risk, information asymmetry, sovereign rating, infrastructure, financial market developments, non-promoters shareholding, price-earning (P/E) ratio, impact cost (cost that is attributable to lack of market liquidity) etc. For this study, the researcher considers only few selective macroeconomic and stock market variables of domestic and foreign country based on his judgement.

### 3.7.5 Data Design

The data for the research can be collected in two forms: primary and secondary. This research makes use of secondary data for the study. The secondary data is data which is already available and also this data could be accessed through several external materials. Secondary data for this research
has been collected with the help of books, journals, magazines, and online sources. The sources of data collected for the study includes official and government websites, economic and stock exchange reports.

### 3.7.6 Research Software & Techniques

The data analysis and interpretation process identifies solution to the research problem. The data collected from the different sources are analysed with the help of appropriate statistical & Econometric software. This research used SPSS 16.0, E-views 7.1 and Microfit 4.1 for analysing the data. The statistical and econometric techniques like Correlation Analysis, Granger’s Causality Test, Variance Decomposition, Impulse Response Function, Autoregressive Distribution Lag (ARDL) test and Autoregressive Conditional Heteroscedasticity (ARCH) family models have been used in the analysis of data.

### 3.8 LIMITATIONS OF THE STUDY

Although utmost care was given by the researcher to overcome omissions, errors and bias in data, there were certain limitations experienced during the various stages of the study. The main unavoidable limitations are as follows:

1. Despite India receiving FII investment flows from across the world, the researcher considers only US macroeconomic and stock market variables as a foreign country determinant of FII investment in India. This is due to the fact, US is the single largest FII investing country in India with 27% of total FII investments (SEBI, April 30, 2012). This practical limitation of considering only US as representative of all FII investing countries may have some drawbacks in the outcome of the study.
2. CNX Nifty index is used as a proxy for Indian stock market as it is considered as one of the best Indian stock market indicator along with BSE Sensex to represent the Indian stock market movement. However, still this National Stock Exchange’s (NSE) premier index is not an exact representative of the share market in India as a whole.

3. The research undertaken involves different variables like Foreign Institutional Investors, Stock market return and Macroeconomic indicators: All these variables are highly sensitive to the current and recent past information. Thus, the result obtained in the research may hold well under the present environment only for a shorter time span.

4. There are numerous factors which affect FII investments in India but for this research, only selected macroeconomic and stock market variables are considered based on their significance learned in the existing literatures.

5. In finding out the determinants of FII investment flows, Gross Domestic Product (GDP) data may be more relevant in measuring economic growth than Index of Industrial Production (IIP) data. However, the study uses IIP data as a representation of economic growth mainly because of uniform data frequency and to avoid normalization issue.

As a result of the above limitations in data selection and framework, the outcome attained in the study shall not be generalized as such.

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4. For time-series analysis, use of low frequency data such as Quarterly shall normalize the effect and the study output may not be effective in capturing the real impact. GDP is a Quarterly published data.