Research Methodology

The tool used for the purpose of studying the relationship between the variables would be correlation and coefficient of determination.

The tool proposed for investigating the ability of the variables in constructing a model would be multiple linear regression analysis. For this purpose of the study, the Indian stock index (NIFTY 50) will be the dependent variable (say “Y”) and the independent variable would be money supply (say “x₁”), foreign institutional investment - FII (say “x₂”), money supply - M3 (say “x₃”), foreign exchange reserves - FX (say “x₄”) indexes DOW 30 (say “x₅”), FTSE 100 (say “x₆”), and NIKKEI 225 (say “x₇”). The three indexes viz. DOW, FTSE and NIKKEI has been chosen to represent the developed market index from American, European and the Asian geographies.

The model would be constructed as following

\[ Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + e \]

Further, the independent variables would be constantly evaluated throughout the process and may be reviewed to include or eliminate one or more variables. This would enable in achieving the objective of the study and enhance the goodness of the constructed model.

The methodology would necessitate for employment of other supplemental statistical tools for further analysis and validating the model such as correlation, co-variance, coefficient of determination and other tests to affirm the strength of the model built.

Research Design: Quantitative Research

Quantitative research involves collection of data and converting it into appropriate form in order conduct statistical computations to arrive at meaningful conclusions. Quantitative based researches are heavily dependent on the data and the tools applied to achieve the objectives
considering various factors like time, affordability and other limitations. As mentioned previously, the study would involve collection of data from authentic sources, treating it for application of statistical tools. The identification of the variables for which the data is collected is based on the previous knowledge and theoretical background. The data collected would be analyzed to arrive at the conclusion to achieve the objectives laid under the study.

**Sampling Technique:** Convenience sampling

Convenience sampling involves selection of sample data from the universe based on convenience and is non-probabilistic technique. Given the parameters involved in the study, it is essential to have data for the given period consistently and the aspect of measure should be comparable within the series of data. Further, the data should be of a relatively longer period to generalize the relationship and conclusions that would essentially be drawn from the study. Hence, the convenience sampling method has been employed so that these aspects can be considered to achieve the objectives.

**Sample Size:** 153 data points for each of the variables considered.

**Data and Source:** The study is based on the secondary data and would be primarily analytical. The index data from the period of 1998 would be utilized for the study and the same would be sourced from finance websites of Yahoo! and Google. The data on the NIFTY index and other variables would be sourced from the NSE website and RBI official website respectively.

**Data Analysis & Interpretation:** The collected data will be treated, smoothened and arranged in appropriate sequence. Further the data will be tabulated for constructing graphs, charts and diagrams wherever applicable. To achieve a meaningful and valid prognosis the data would be analyzed using SPSS and MS-EXCEL.
Scope of the study
As mentioned earlier, the stock market index is a function several macro economic variables and their degree of interaction. Identifying all the variables and capturing them in the model has pertinent difficulties. Firstly, it is not possible to identify all the relevant variables since it is vast, time consuming and may not be even a fruitful attempt. Secondly, more independent variables may lead to statistically less significant results and thereby diminishing the predictability power of the model. Hence, the study would be restricted towards the identified variables or a lagged series of existing variables.

Utility of the study
The recent financial turmoil in the global markets has affected the index performance of all the nations at various degrees and India is not insulated to this phenomenon. The study would lead to designing a model that would enable in prediction of the performance of the index given the quantum of the independent macro economic variables. The primary utility of the study is that it would serve as platform in understanding the behaviour pattern and the degree of the response by the index to the changes in the independent macro economic variables. This would certainly enable in prediction of the direction of the index if not the accurate point for a given change in the variables.

Further, on the policy front it would throw light upon the desired level of raising the cap for FII inflow to instigate a substantial index performance. Moreover, it would also capture the response of the Indian stock index performance to that of the index performance of the developed nations which would provide vital clues regarding the degree of association.

The stock markets have been one of the attractive investment avenues especially the developing markets like that of India to the global investors. The study would enable the investors, portfolio managers and other investment professionals to alter the equity investments depending on the prevailing economic conditions.