Chapter -3
Research Methodology and Data Collection

This chapter is discussed under the following headings:

3.1 Purpose of Study
3.2 Objectives
3.3 Statement of Hypothesis
3.4 Methodology
3.5 Scope
3.6 Tools
  3.6.1 Primary Data
  3.6.2 Secondary Data
  3.6.3 Design of questionnaire
  3.6.4 Validation of Hypothesis
  3.6.5 Limitation of the study
3.7 Collection of Primary Data
  3.7.1 Design of questionnaire
  3.7.2 Pilot Study
  3.7.3 Collection of Samples
3.8 Collection of Secondary Data

3.1 Purpose of study

Since a considerable time has passed (since year 2000) after the introduction of the derivative instruments in Indian financial system, this study attempts to gauge the effectiveness of the regulatory structure of the Indian derivative markets and scope for overhauling.

3.2 Objectives:

1. This research thesis attempts to analyze the positive features in the present regulatory structure, its loopholes and put forward suggestions/observations to peg them through a process of analysis.
2. It also attempts to find ways and means of enhancing the effectiveness of derivative trading.
3. To find proper solutions by means of which the present system could be overhauled.
3.3 Statement of Hypothesis:

- The functioning of derivative is effective.
- The overhauling of the derivative is imperative to realize its full potentiality.

3.4 Methodology:

a. The primary sources of collection of the data would be from SEBI, Derivatives Exchange, Bombay Stock Exchange (BSE) and National Stock Exchange (NSE), MCX, NCDEX, Financial Institutions, Merchant Bankers apart from brokers who would be trading in these exchanges. Purposeful Random Sampling technique been administered for collecting primary data.

b. The research would include primarily the study of existing mechanism of various methods of trading in stock exchanges (derivatives, badla etc.), its history, success and failures.

c. Study the emergence of derivatives method of trading in the world and in India.

d. Studying its regulatory structure, comparing it with badla system, by finding out their weaknesses and strengths.

e. Studying the impact of derivatives trading on the Indian Financial System.

f. Analyzing them and recommending ways to stabilize the regulatory system of derivatives.

g. Descriptive and Exploratory research methods are used to gather and analyze data. Exploratory research would rely on collection of data through secondary research such as reviewing available literature and/or data, or qualitative approaches such as informal discussions with respondents (here brokers, managers in Financial Institutions and Banks, management of the regulatory bodies) and more formal approaches through in-depth interviews, focus groups, projective methods, case studies or pilot studies. Internet research methods like posting of questionnaire through Google support would be used to reach respondent. The results of exploratory research would provide significant insight into a given situation or concept.

3.5 Scope:

a. The research would involve study of how derivatives are traded in the Stock Exchanges (equity being the underlying).

b. The research would include study of regulatory structures in India and USA.

3.6 Tools:

The information for the thesis would be collected through following modes:
3.6.1 Primary Data:

a. Interviews of brokers, authorities from SEBI, Stock Exchanges, Banks, Financial Institutions and Investors etc. (Minimum 50 sample size).
b. Notes from observations made while derivatives trading being taken place and functioning of the stock exchanges.

3.6.2 Secondary Data:

a. Written Material on Derivatives available in Books, on Internet and Research Papers.
b. Study of Rules and Regulations of Derivatives Trading and Structures of different Stock Exchanges and countries.
c. Appropriate random sampling techniques will be used and data will be collected on the basis of an exhaustive questionnaire.
d. Appropriate analytical tools will be used for analyzing the data.
e. Appropriate data in terms of conceptually equivalence would be taken.

3.6.3 Design of Questionnaire:

Three questionnaires were designed to seek responses from the stakeholders in the derivative market. They have been attached as annexure:

a. From Regulators
b. From professionals in banking and finance area
c. From Derivative traders

3.6.4 Validation of Hypothesis

The hypothesis is validated by the research.

3.6.5 Limitation of the study

The study is limited to India; most of the data was collected from Mumbai as it is the epicenter of financial economy of India. The sample size could have been larger. Since the study is descriptive, the testing of price volatility and discovery process, which is the primary feature of a derivative market, has been done quantitatively, limited to the scope of the hypothesis. The same could be analyzed in detail.
To support our hypothesis and to verify and validate hypothesis in concurrence with the objectives and the primary data, I have collected information and other details from various appropriate and current sources that was available during the period 2007-08 and 2008-09.

3.7 Collection of Primary Data
Primary data was collected through a structured questionnaire. The questionnaire was administered to three different groups and hence had a combination of type of nominal scale and ordinal scale questions were posed. Questionnaire one for Regulators consisted of combination of open ended questions. Likret Scale was used to collect responses from the respondents.

3.7.1 Design of Questionnaire:
Three questionnaires were designed to seek responses from the stakeholders in the derivative market.
They have been attached as annexure:
- From Regulators
- From Derivative traders
- From professionals in banking and finance area

3.7.2 Pilot study:
A pilot study of 12 sample size was conducted to fine tune the questionnaire to be administered on derivative traders. The following brokers were piloted:
1. Indian Capital Market Pvt. Ltd.
2. Ajcon Global Services
3. Angel Broking
4. Nivesh Online
5. T3B India
6. Laxmi Finance and Investment
7. Tycoon Finance Company
8. Excel Advise and Excel Investment
9. Money Managers
10. Amtej Financial Services
11. Bigshare Services Pvt. Ltd.
12. LKP Shares and Securities
As per the responses/feedback the questionnaire was re-designed to capture the best responses. The questionnaire of regulators and professionals in banking and finance area were designed by taking inputs from experts and hence were not piloted.

3.7.3 Collection of samples through Primary Data:

Primary Data was collected through three structured questionnaires posted online and hard copy. Visits to brokers, regulators, banks and financial institutions for collection of data, and expert opinions along with personal interactions with the authors of the research papers formed part of primary data collection methodology.

Questionnaire I for Regulators: Responses (4) from SEBI, NSE, MCX and BSE were obtained. Responses from RBI was not sought as it did not come under the purview of equity financial regulator. Although adequate secondary research was done to cover derivative structure of RBI. The respondents interviewed were:

a. **SEBI**: Mr. Atul Mittal – Head Derivatives Division of SEBI, and Mr. Krishnanand- Head Vigilance SEBI

b. **MCX**: Dr. V Shunmugam, Chief Economist, MCX and Mr. Debojyoti Dey Economist

c. **BSE**: Mr. Ambarish Datta, Head- BSE Training Institute, Mr. Rakesh M Bhatt, Manager, BSE Training Institute.

d. **NSE**: Mr. Arup Mukherjee, Assistant Vice- President, NSE

Questionnaire II for Derivative Traders: A sample of 18 was collected from the population of 150 (November, 2009) derivative traders, which is approx. 10% of the population size and was collected from the BSE website in 2008. The list of derivative traders although was available on the NSE website, the same could not be accessed without entering broker information, hence the list was derived from BSE website which had posted 150 derivative traders. The same has been updated on both the websites since then.

Questionnaire III for professionals in banking and finance area: A sample of 61 was taken from the population of banks and financial institutions. As per the report on INDIA’S FINANCIAL SECTOR - AN ASSESSMENT, Volume V, Advisory Panel on Financial Stability Assessment and Stress Testing, Committee on Financial Sector Assessment March 2009, RBI, Govt. of India, there were:
Custodians       16
Mutual Funds       43
Merchant Bankers    132
Portfolio Managers    230
Total     521

Out of the population of 521, questionnaires were given to 150 respondents, concerned with financial
derivatives; a significant response from 61 respondents was received. The entire population of my
study consists of respondents from various categories, which included the above respondents along
with the following:

a. Traders
b. Fund Managers
c. Clearing Corporations
d. Bankers
e. Academicians
f. Finance Journalist

This is a wide spectrum ensuring appropriate coverage. I have taken a purposeful random sample of
respondents, belonging to each category. Most respondents had requested not to reveal their identity
as they felt that the information sought was sensitive.

Even though I have distributed my questionnaire to as many as approximately 150 members
belonging to the above mentioned categories and as a result of my personal meetings with some and
online persuasion with others, I could get a significant response of 61 respondents, belonging to all
the said categories. These 61 respondents form 10% of the entire population, which is quite an
adequate and representative size to draw my inferences, which adequately represents the entire
population. Hence the inferences are realistic.

The L C Gupta committee had conducted a survey addressing the potential players in the financial
derivative market in India on eve of the introduction of derivative instruments in the market. The
sample size for the survey was 120 respondents. The Bimal Jalan committee on “Review of
ownership and governance of market infrastructure institution” (November 2010) report had a sample size of 29.

3.8 Collection of Secondary Data

Secondary data was collected through research papers from online databases of peer reviewed journals like Emerald and EBSCO, through official websites of SEBI, RBI, NSE, BSE, MCX, NCDEX, Thomson Reuters, Finance Ministry (Govt. of India), Bank for International Settlements (BIS), World Bank, International Monetary Fund (IMF), Securities Exchange Commission (SEC), Books on Derivatives, Research articles, speeches by SEC regulators and news papers articles. Software like prowess, capital online was also used to collect secondary data. Secondary data analysis collected from Thomson Reuters and NSE was done to validate the hypothesis. The data contained closing prices of cash market and index futures of NSE. The details are in the ‘Analysis’ chapter.