CHAPTER 4

RESEARCH METHODOLOGY

4.1 RESEARCH PURPOSE

Due to the great transparency and quality of financial reporting, the mutual fund industry has been subject to a large amount of research, which has over time considerably extended our knowledge of the main elements of the industry. Issues like performance measurement, style, manager’s compensation have been explored by many contributions. In some cases the overall picture is clear. Some issues, however, remain obscure due to contrasting theoretical results. The mutual fund industry has grown dramatically over the last twenty years (SEBI, 2008). Yet, there is much to learn about that industry.

Investors prefer mutual funds based on their safety, liquidity, reliability, tax benefit and returns. Now when the mutual fund industry is gaining maturity, it is important to know the preferences of investors in the various mutual fund schemes. To meet the needs of the potential investors, many studies have been carried out. The following are the noteworthy studies carried out by academicians contributing towards the all round development of the mutual fund industry. The research work by Friend, et al., (1962), Sharpe (1966), Treynor and Mazuy (1966), Jensen (1968), and Tito (1969) and Fama (1972) contributed for the development of the theoretical modeling and in framing the methodology for the quantitative evaluation of mutual funds with risk-return as parameters. Based on the methodology developed by the above authors, Friend, Blume and Crockett (1970) identified the relationship between performance and turnover.
Carlson's (1970) analysis brought out relationship between cash inflows into funds and consistency between risk and return. Williamson (1972) & Klemosky (1977) identified correlation and consistency between the rankings of adjacent two periods. Klemosky (1973) introduced mean absolute deviation and semi-standard deviation as risk surrogates compared to the composite measures derived from the CAPM to remove bias in Sharpe, Treynor, and Jensen's measures. John and McDonald (1974) identified that more aggressive funds experience better results due to the relationship between objective and risk-adjusted performance. Gupta (1974) found out that, return per unit of risk varied with the level of volatility assumed, and funds with higher volatility exhibited superior performance. Meyer's (1977) findings based on stochastic dominance model, revalidated Sharpe's findings. Rich Fortin, Stuart Michelson (1995) identified that lower expense ratio existed in no-load funds and suggested their suitability for six year holding while load funds were suitable for fifteen year holding. Wilfred L. Delva and Gerard T. Olson (1998) observed that, informational competence of funds increased the efficiency in operation, reduced expenses besides providing higher risk-adjusted returns. Vidyashankar S. (1990) & Bansal L. K. (1991) opined that Indian mutual funds would become one of the predominant instruments of investment due to the benefits of liquidity, safety, reasonable appreciation, better control and accountability ensured through a set of guidelines by Association of Mutual Funds of India(AMFI), Securities and Exchange Bureau of India (SEBI) and Government of India. Sarkar A. K. (1991) pointed out that Sharpe and Treynor performance measures ranked mutual funds alike even with different risk levels and suggested the usage of Treynor measure to compare individual assets with portfolios. Though a much valuable research has been undertaken
in this field but a little has been done to gauge the attitude of retail investors towards making choice amongst various mutual fund schemes in India. Thus to supply the shortcoming of literature the study is being conducted in terms of following hypothesis and objectives.

4.2 RESEARCH HYPOTHESES

The mutual fund industry has grown dramatically over the last twenty years (SEBI, 2008). Yet, there is much to learn about that industry. Investors prefer mutual funds based on their safety, liquidity, reliability, tax benefit and returns. Now when the mutual fund industry is gaining maturity, it is important to know the preferences of investors in the various mutual fund schemes. To meet the needs of the retail investors, few studies have been carried out. In this backdrop, it is imperative to formulate the hypothesis as follows:-

Demographic factors play a vital role in decision making process; few studies are carried in this context. Dr. Bhagaban Das, Ms. Sangeeta Mohanty and Nikhil Chandra Shil (2008), studied the demographic behavior of the retail investors in the selection of investment in mutual funds, concluded that demographic factors influence the choice of investors while making investment decisions. Another survey conducted by Sikidar and Singh (1996) revealed that the salaried and self employed constituted the major investor group in mutual funds primarily due to tax benefits. K. Senthil Kumar, C.Vijaya Banu, V. Lakshmana Gomathi Nayagam (2008) found that the old investors were mostly inclined towards the safety of their principal and want a stable return from their investment, so the
group with old investors should have preferred the criteria “Security of principal” and “Stability of return” and group with young investors should have preferred the criterion “Capital growth” as the growth is usually at the cost of risk as the young investors have good future years left to work, so they were not quite bothered about the risk.

**H1: Demographic profile has a significant impact on investment decision of retail investors.**

Vidhya Shankar S (1990) & Bansal L. K. (1991) opined that Indian mutual funds would become one of the predominant instruments of investment due to the benefits of liquidity, safety, reasonable appreciation, better control and accountability ensured through a set of guidelines by Association of Mutual Funds of India (AMFI), Securities and Exchange Bureau of India(SEBI) and Government of India. Ms. Kavitha Ranganathan (2006) said that the saving objective of individual investors remains the utmost priority and preference for the saving instrument amongst the individual investors was influenced by pension, provident fund. Further he also found that the preferential feature in mutual funds depend upon the psyche of Indian investors in three words; yield, Security, liquidity. Another study conducted by the Investment Company Institute (ICI) Director of Investor Research (2006) studied the Investor Preferences for Mutual Fund Information sources. Therefore keeping in mind the conceptual framework, hypothesis 2 is proposed as follows:

**H2: Type of mutual fund scheme is impacted by retail investors’ preferences.**
4.3 RESEARCH OBJECTIVES

Keeping in view the hypothesis framed for the study, the following four objectives were set forth:

1. To identify the various sources of information used by the investors for investment decisions making.

2. To analyse the impact of demographic factors on investors’ decision.

3. To analyse the attitude of investors towards the various mutual fund schemes.

4. To suggest strategies to enhance retail investors acceptability of mutual fund.

4.4 QUESTIONNAIRE DESIGN AND DEVELOPMENT

Since the study is investors centric, the primary data has been collected using the field survey method. For the purpose, a structured questionnaire was developed, pretested and personally administered to the target investors of mutual funds schemes. The initial questionnaire was based on seven point Likert scale containing 43 items for measuring various variables under study namely:

- Investment Decisions
- Attitudinal Preferences
- Sources of Information
- Demographic Variables
4.5 PRE TESTING AND FINAL INSTRUMENT

The first section of the questionnaire are about the investment decisions of the retail investors (mutual fund schemes), the second section of the questionnaire contain the statement about the attitude of the investors, third part of the questionnaire contains the various sources of information consulted by the investors while making investment decisions in mutual fund schemes and the last section deals with demographic variables of the investors. The questionnaire drafted was pretested by collecting responses from 127 respondents in Jammu. Analysis of the initial data provided sufficient inputs to design a structured questionnaire with all the relevant measures of Investment decisions, attitudinal preferences and sources of information by eliminating two items from the measures of attitudinal preferences, three items from sources of information. The final questionnaire was framed using a seven point Likert scale consisting of statements covering three dimensions Vis; investment Decisions, Attitudinal Preferences and Information Sources. All the dimensions except Investment Decisions were measured on a scale of 1 to 7, where 1 represents Strongly Disagree and 7 represents Strongly Agree.

4.6 SAMPLING

The final sample size was determined after pretesting by using the formula (Malhotra, 2008, p-371):

\[ n = \frac{\sigma^2 z^2}{D^2} \]
As the standard deviation of pre testing was 0.80, the final sample size came as 983.29, which were rounded off to 1000. The data were collected using stratified sampling technique from 250 investors each from four cities of north India i.e. Jammu, Srinagar, Chandigarh and Ludhiana from the investors of mutual funds who were investing in mutual funds Schemes. After preliminary examination, 841 questionnaires out of 1000 were found to be complete and valid that constituted 84.1% response rate for the study.

4.7 DATA TABULATION, STATISTICAL TOOLS AND TECHNIQUES USED FOR PROCESSING

The data so collected from the investors was coded as per the requirement and simultaneously fed into the MS-Excel 2007 spreadsheet and then transferred to SPSS 19 data editor for further statistical processing. The various statistical tools that were used in the study are:

4.7.1 Measure of Central Tendency (Mean)

This measure is mainly used for summarizing the essential features of a series and for enabling data to be compared. It is acquiescent to algebraic treatment and is used in further statistical calculations.

In this study, measure of central tendency (Mean) was used to identify the point about which items have shown a tendency to cluster.
4.7.2 Measure of Dispersion (Standard Deviation)

An average can represent a series only to some extent and can not reveal the entire story of any phenomenon under study. It fails to give any idea about the scatter of the values of items of a variable in the series around the true value of average. In order to measure this scatter, statistical dispersion is calculated.

4.7.3 MULTINOMIAL LOGISTIC REGRESSION ANALYSIS

Multinomial logistic regression is a regression model which generalizes logistic regression by allowing more than two discrete outcomes. That is, it is a model that is used to predict the probabilities of the different possible outcomes of a categorically distributed dependent variable, given a set of independent variables (which may be real-valued, binary-valued, categorical-valued, etc.). Multinomial logistic regression is a particular solution to the classification problem that assumes that a linear combination of the observed features and some problem-specific parameters can be used to determine the probability of each particular outcome of the dependent variable. Multinomial logit regression is appropriate in cases where the response is not ordinal in nature. For the present study, this tool has been used for studying the impact of dependent and independent variables.

4.7.4 Percentage Analysis

This technique has been applied to examine the percentages of the demographic profile of the investors.
4.7.5 Factor Analysis

The data collected was subjected to factor analysis for dimension reduction and find relevant factors. Bartlett’s Test of Sphericity indicated a high Chi-square value of 5960.098 with 378 degrees of freedom at significance level of .000 leading to the rejection of null hypothesis, i.e. the investor’s preferences are identical while making investment decisions. Further, a high KMO value of 0.770 (>0.5) confirmed the appropriateness of use of Factor analysis for identification of relevant variables. Varimax Rotation results indicated that 31 statements relating to Attitudinal Preferences and Sources of Information could be reduced into five factors Vis:

1. Investment Returns
2. Perception of Investors
3. Information Sources
4. Investors Valuation
5. Objectives of Investors

4.7.5 Reliability Analysis of Measurement scales

The reliability analysis of various measurement scales was done using Cronbach’s Alpha method. Since the Alpha values of all the scales were above 0.7, the measurement instrument is deemed to reliable for use.

Thus the present research has been undertaken by using advanced statistical techniques like Factor analysis, Multinominal Logistic Regression Analysis to achieve research objectives and validate the hypothesis of the study.
REFERENCES


