CHAPTER 3
RESEARCH METHODOLOGY

Mutual Fund is a topic which is of enormous interest not only to researchers all over the world, but also to investors. Choice of fund remains an important question for several market entrants. Though the investment objectives define investor’s preference among fund types (balanced, growth, dividend etc.) sponsor’s reputation and choice of funds remains to be probed. Indian mutual fund industry has two distinct types of sponsors, government and private.

3.1 STATEMENT OF THE PROBLEM

The Mutual fund industry in India has witnessed a strong growth over the years. Though SEBI is introducing new regulations in the Mutual fund industry, investors in current scenario are in ambiguity to select a right equity scheme due to many players in the market. Analysis of mutual funds performance is important both for investors as well as fund managers.

The stock markets are highly volatile and too complex for new small investors. Lack of understanding among Indian investor limits them in taking good investment decisions. Such limitation leads too misguidance and agents selling schemes without an in-depth analysis. This study attempts to bring out the analysis of performance of select equity mutual funds in India.

The study aims to present conceptual and technical aspects of the mutual funds especially on the equity growth schemes and also for the functional improvement of the industry. Thus it can be said that the present study is motivating and pertinent to investors and industry as a whole.

Also, investors in India seem to have less technical knowledge of equity mutual funds. They may also be stopped from investing due to either ignorance or ambiguity. This ignorance and ambiguity may stem from their cognitive and emotive behaviors. The Cognition and Emotions are seated on the two sides of the brain according to split brain theory. Hence the study examines if there was any influence of brain dominance on the equity mutual fund decision of the investor.
3.2 RESEARCH METHOD

The study is basically descriptive, exploratory and analytical in nature. The study attempts to analyze the performance of mutual funds and concludes on the risk and returns of the funds to the investors. The study also attempts to find if there is any influence of left-right brain on the decision making of an individual when he invests on equity mutual funds.

3.3 THE METHODOLOGY ADOPTED

The research consists of two components: the first part of the research deals with the analysis of the performance of selected Indian Large cap and mid and small cap Open Ended Equity Mutual funds followed by the second half i.e. analysis of investor’s attitude towards investments in Equity mutual fund in India using left-right (Cognitive-Emotive Behavior) brain concept.

The risk free rate considered in the present study is explained below in the section 3.3.1.

3.3.1 RISK FREE RATE (Rf)

The Risk free rate of return refers to that minimum return on investment that has no risk of losing the investment over which it is earned.

For the present study, 91-Days Treasury Bills have been considered, which is 8.2% (as on December 10th, 2014).

Source: http://www.rbi.org.in

3.4 OBJECTIVES OF THE RESEARCH

The primary objective of the research is to evaluate the performance of equity mutual fund and to assess investors’ attitude towards investment in Equity mutual fund with respect to their financial needs, objective, and time frame of investment, risk aversion, movement in the value of investment, experience, preference and margin of safety of funds.
The following are the objectives of the present research:

1. To evaluate the performance of Selected Indian Open ended Equity Large Cap and mid and small cap funds,
2. To find the influence of Investor’s left and right brain on equity mutual fund decision making, and
3. To explore factors of decision making regarding investing on Equity mutual funds.

3.5 HYPOTHESIS

The Following hypotheses are taken as flag posts to the present study. In the first half of the research (first component of the research) we have evaluated the performance of large cap and mid and small open ended Equity mutual funds. This study (only first component of the research) is based on the secondary data.

Objective 1: Hypothesis is not set for the first component of the research. In the first objective performance evaluation of selected 30 equity mutual fund schemes are done.

Objective 2: To find influence of left and right brain on equity mutual fund decision making.

Hypothesis 1: Hypothesis relating to influence of brain dominance of mutual fund investment decision (Second component of the research).

H0: There is no difference in Left-Right Brain Dominance across Gender, Occupation Age, Income and Qualification of respondents.
H1: There is difference in Left-Right Brain Dominance across Gender, Occupation Age, Income and Qualification of respondents.

- Hypothesis 2:

H0: There is no relationship between Left-Right brain dominance and critical factors of decision making in mutual funds.
H1: There is relationship between Left-Right brain dominance and critical factors of decision making in mutual funds.
Objective 3: To explore factors of decision making regarding investing on Equity mutual funds.

Hypothesis 1:

H0: There is no relationship between critical factors of decision making and investing in mutual funds.

H1: There is relationship between critical factors of decision making and investing in mutual funds.

3.6 SOURCES OF DATA

The study is a blend of both primary (Second Component of the research) and secondary data (First component of the research). The primary data required for the study is collected using a questionnaire which was administered to investors.

The Secondary data was collected for analysis of mutual funds performance. The Historical data of last five years, which included data from NSE India website and in case of funds, is the NAV closing price from AMFI website.

3.7 SAMPLING FRAME

The sampling frame for the study is the mutual funds listed. The study attempts to evaluate the performance of the Open ended Equity oriented growth scheme Mutual funds from 2009 to 2014.

In the research the selected Open ended equity oriented growth schemes currently operating in the industry are considered and the performance of those schemes from 2009 to 2014 are taken and even the investors and distributors are taken into consideration keeping this in view. The bench mark or market considered for the study is CNX Midcap index (Midcap funds) and CNX Nifty (Large Cap funds).

3.8 SAMPLE SIZE FOR MUTUAL FUND ANALYSIS

Based on the data maintained by the Securities and Exchange Board of India (SEBI), Mumbai accounts for more than half of the total cash market turnover. The cities such as Ahmedabad, Bengaluru, Delhi, Hyderabad, Rajkot and Kolkata also contribute a sizeable chunk. Bengaluru is one in the top 20 cities which has highest equity Market investments. Bengaluru has an investment culture because of its economic growth and
being the IT capital of the country. Bengaluru houses the Bengaluru Stock Exchange with 250 permanent members. Hence, Bengaluru is taken as a city from which the investors are drawn. Belagavi being the second capital of Karnataka is a ‘B Category’ city and selected as one of the smart cities in India. This city also has an investment culture due to its proximity to Mumbai and Pune. Hence these two cities are the sample frame for the present study. Equal numbers of respondents are interviewed from each District.

3.8.1 SAMPLE METHOD

For the present study of the first half, Random sampling method was used to pick large cap and mid cap funds. Before picking the funds, a tool was administered to list such mutual funds to which the awareness is very high. Secondly, from this list of funds the sample is selected randomly and also by considering mean returns and standard deviation of individual fund.

For the present study of the second half, sample of 200 respondents from each city has been taken on the basis of the tool that has been developed for the study and keeping in mind the use of factor analysis. For Exploratory factor analysis, the sample size should be three times the number of statements. The numbers of statements are 56 and three times 56 is 168. This has been rounded off to the nearest 100. Hence, 200 respondents from each city were chosen to the sample for the study. The data was collected from August 2015 to November 2015.

The below table 3.1 shows that the sample is adequate with a measure of 0.886 which is highly acceptable.

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<thead>
<tr>
<th>KMO and Bartlett's Test</th>
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<tbody>
<tr>
<td>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</td>
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<tr>
<td>Bartlett's Test of Sphericity</td>
<td>Approx. Chi-Square</td>
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Table 3.1: KMO and Bartlett's Test.
3.9 RESEARCH TOOL FOR DATA COLLECTION

The Primary data was collected with the help of structured questionnaire. The tool consisted of four parts. The Part A deals with the respondents profile, Part B deals with the rating of Brain Dominance, Part C deals with Factors influencing decision making on equity mutual funds and Part D deals with the analysis of relationship between Demographic profile, Left-Right brain Dominance and critical factors of decision making and in the same section, the relationship between the factors and brain dominance has been established.

3.9.1 TOOL DEVELOPMENT

The tool consists of statements which measure the attitude or disposition of the investor at different stages of decision making on investing on mutual funds. The statements were developed by first identifying the stages of Investors decision making. Under each stage of decision making, statements were developed on what the investor does in each stage and what is the investors attitude in the decision making stage. Further, it was identified if the statement reflected cognitive thinking or emotive. The statements which reflected cognition were named as Left Brain statement and those which reflected emotion was identified as right brain statement. The responses were measured on a five point likert scale. The scale ranged from strongly disagree to strongly agree.

3.9.2 BRAIN DOMINANCE TEST TOOL

The test tool for computing brain dominance has been adopted from ‘Sommer and Sommer’ for determining which side of the brain is more dominant. Each statement of the brain dominance test has three responses with responses either left brain response, right brain response or mixed brain response.

This test measures if the response is auditory, visual or verbal. Every question has three responses. There are 10 questions the responses have 1 score each. Those who scores of 0,1,2,3, are considered left brain, scores of 4, 5 are considered mixed brain dominance and 6,7,8,9 are considered as right brain dominance.
3.10 PRETESTING OF RESEARCH TOOL

The tool was developed exclusively for the present study which was pretested regarding the reliability and appropriateness. The initial tool measuring the dimensions of decision making was pretested with 10 respondents.

There were 62 statements in the tool. The statements were rated by the experts and those statements which had a mean score of less than 1.5 are excluded and only those above are retained. The final set of statements has been reduced to 56. The Pilot Test was carried out to test the tool with 10 respondents. Feedback was collected regarding readability, understandability, appropriateness of each item and the time taken for filling the questionnaire. Their feedback resulted in the modification of the tool several items and the layout of the instrument.

The Reliability of the scale was conducted and the chronbach alpha value is 0.687 as shown in table 3.2, which indicates that the scale is fairly reliable and can be used for the study.

<table>
<thead>
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<tr>
<td>N</td>
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<td>------</td>
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<tr>
<td>Cases</td>
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<td>Valid</td>
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<td>Excluded(a)</td>
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<td>Total</td>
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<tr>
<th>Reliability Statistics</th>
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<tbody>
<tr>
<td>Cronbach's Alpha</td>
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<tr>
<td>.687</td>
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</table>

Table 3.2: Case validation and Reliability Statistics.
3.11 ANALYSIS OF PRIMARY DATA

The analysis of Primary data has been carried out with the help of statistical analytical tools. The SPSS 20 statistical package has been used to analyze data. In analyzing profile of respondents and their investment habits descriptive statistics has been used. The Exploratory Factor Analysis has been used to evaluate the critical factors of decision making on investing.

The Correlation is used to establish relationship between the factors of decision making with Left-Right Brain Dominance.

The Hypothesis has been tested using Chi-Square Tests and Co-efficient of Determination and figures (graphs) and tables are used wherever necessary.

3.12 LIMITATIONS OF THE STUDY

- Time Frame: The mutual fund performance is evaluated considering the NAV for five year period. Hence the interpretations are based on the time frame of the data.
- Time and Data constraint: Due to time constraint only 15 large cap and 15 mid cap funds have been analyzed. Also the addition of number of funds for analysis would have resulted in huge data only 30 funds have been considered for analysis.
- Geographical Constraint: Though there are several cities in India which have relatively higher investments and a robust investment culture, the cities selected are the ones only which are in the jurisdiction of Karnataka State.

3.13 CONTRIBUTION OF THE RESEARCH

With the motivation towards open ended equity mutual fund research. The study aims to present conceptual and technical aspects of the mutual funds especially on the open ended equity growth schemes and also for the functional improvement of the industry. The contributions of this part of the research are listed below:

- The Sample size, frame and method was carefully analyzed and selected.
- The pretesting of research tool was developed exclusively for the present study which was pretested regarding the reliability and appropriateness.
- The Reliability of the scale was conducted and the chronbach alpha is 0.687 which indicates that the scale is fairly reliable and can be used for the study.
The Hypothesis has been tested using Chi-Square tests and co-efficient of Determination.

In the next section the summary of the present chapter is presented.

3.14 SUMMARY OF THE CHAPTER

In the present chapter, we discussed regarding the methodology adopted for the first and second component of the research. The Hypothesis, Sources of data, Sampling frame, Design of Research tool, Pretesting of Research tool and Limitations of the present study was explained.

In the next chapter, Analysis of the performance of selected Open ended Equity mutual fund is carried out. The performance analysis of 15 mid and small cap equity funds and 15 large cap funds have been evaluated.