CHAPTER – II

REVIEW OF LITERATURE
CHAPTER - II

REVIEW OF LITERATURE

The academic literature on the measurement of mutual fund performance stretches back over 50 years. A large number of studies on the financial performance of mutual funds have been carried out during the past, in the developed and developing countries. The studies are a wealth of contributions towards the performance evaluation of mutual fund, market timing and stock selection abilities of fund managers. The idea behind performance evaluation is to find the returns provided by the individual mutual fund schemes and the risk levels at which they are delivered in comparison with the market and the risk free rates. Mutual funds are important vehicles for investment in the stock market for both individuals and institutions. The mutual fund industry has, in addition to the increasing attention from investors, gained significant attention in academic research. Several studies which examine investor behaviour have appeared since the 1990s.

The reviews in this chapter are divided into two main sections Reviews relating to growth and financial performance of mutual funds Reviews relating to Individual Investor

SECTION: 1

Reviews relating to growth and financial performance of mutual funds

The performance of the mutual fund industry can be examined in terms of: the nature of the growth of the industry itself, long-term impact of the growth on the economy in general and the financial market in particular, and the benefits to investors in terms of returns on their investments.\(^1\)
A number of academicians, professionals and journalists have written articles explaining the basic concept of mutual funds, their characteristics and reviewed the trends in the growth of mutual funds. They also emphasized the importance of mutual funds in the development of the capital market in India.

The growth of the mutual fund sector, like any other sector of economic activity, is the result of the interaction of demand and supply. In general, the same factors that influence the demand for mutual funds also shape their supply. For instance, the level of income and wealth is, or should be, a major determinant of the demand for mutual fund investments, but income and wealth also affect the supply of such services through their effect on market infrastructure and presence of skilled professionals. Similarly, securities market development is an important factor in stimulating the demand side but also helps promote the supply of mutual fund services.

The availability or shortage of suitable financial instruments is a constraining factor for the growth of mutual funds in many countries. Sometimes, a particular factor acquires overriding importance. For instance, absence of enabling legislation has prevented or delayed the establishment of mutual funds in many countries and continues to do so today in some countries (e.g., Jordan). Regulatory restrictions can also play an important part, either in impeding or in stimulating the growth of mutual funds. Tax rules also tend to have a large impact. A factor of major importance that would be of universal relevance and would explain the growth of mutual funds in many countries is the advent of electronic technology and the concomitant large reduction in the cost of operating a large number of accounts and an even larger volume of transactions (Deepthi Fernando et al. 2003).

GDP per capita is used as an indicator of economic development. Many
studies have shown that financial intermediaries tend to be larger, more active and more efficient in high income countries (Demirguc-Kunt and Levine 1999, cited in Deepthi Fernando et.,al 2003) Sadhak (1997)³ traced the historical background of mutual fund industry in India. He has traced the investment and marketing strategies followed by mutual fund organizations in India. The book contains statistical information about growth of mutual fund industry in terms of funds available for investments and investors account holding.

In an article titled "Mutual Fund Regulations -The Journey So Far" Ajith Kumar Singh⁴ is of the opinion that the regulatory environment for the Indian mutual fund industry compares favourably with the regulations in the most mature and developed financial markets in the world. The regulations have not only instilled confidence in investors, but also facilitated strong growth for the mutual fund industry in India. Many regulatory changes have been implemented to improve surveillance and protect the rights of investors.

Deepthi Fernando et al. (2011)⁵, in a World Bank Policy Research Working Paper observe that, with few exceptions, mainly in Asia, mutual funds grew explosively in most countries around the world during the 1990s. Some of the important findings of her study are-Legal origin are significantly correlated with mutual fund development. Equity funds are more advanced in common law countries, while bond funds are more developed in countries with civil law systems. Higher market returns and liquidity and lower volatility have also contributed to mutual fund growth.

Ajay Khorana, Henri Servaes, and Peter Tufano (2012)⁶ studied the mutual fund industry in 56 countries and examined where this financial innovation has flourished. The fund industry is larger in countries with stronger rules, laws, and
regulations and specifically where mutual fund investors' rights are better protected. The industry is also larger in countries with wealthier and more educated populations, where the industry is older, trading costs are lower and in which defined contribution pension plans are more prevalent. The industry is smaller in countries where barriers to entry are higher. These results indicate that laws and regulations, supply-side and demand-side factors simultaneously affect the size of the fund industry. **Huhmann (2005)** opines that increased number of mutual funds all over the world, mainly in developed countries, is an indication of investors' preference for this indirect mode of low-risky investment.

**Deepak Agrawal (2011)** in his paper provides an overview of mutual fund activity in India. He also analyzes data at both the fund-manager and fund-investor levels. The 26 study revealed that the performance of the Mutual Fund Industry in India is affected by saving and investment habits of the people on one hand and on the second side the confidence and loyalty of the fund manager.

**Mian Sajid Nazir and Muhammad Musarat Nawaz (2010)** examined "The Determinants of Mutual Fund Growth in Pakistan". The study is a pioneer in its nature to investigate the role of various factors in determining the mutual funds growth in Pakistan. The variables used as determinants are management fee, assets, turnover of funds, and size of fund, the proportion of fund in the family, expense ratio and risk-adjusted rate of return as measured by Sharpe ratio. The results have reported that assets turnover, family proportion, and expense ratio are positively leading the growth of mutual funds, in contrast with management fee and risk adjusted returns which are negatively associated with mutual funds growth.

**Financial performance of mutual funds**
The investment performance of Mutual Funds has received considerable attention from researchers and practitioners world over. This section reviews major studies relating to performance evaluation carried out both in India and abroad. Selectivity and Timing Measures of Mutual Fund Performances have not been reviewed because it is beyond the scope of the present study. One of the objectives of this study is to measure and analyze the performance of select Indian open-end equity mutual funds. Hence the main focus would be on performance studies done in the context of Indian Mutual Funds.

**Performance Measurement**

Performance in terms of rate of return: absolute measure of performance. Financial performance of the portfolio depends on the aggregate performance of the individual stocks held in the portfolio. Rate of return is one of the measures to determine the performance of the portfolio. Rate of return has two components, cash inflows (dividend, interest etc.) and capital appreciation or depreciation.

**The Sharpe Index** The Sharpe ratio is a risk-adjusted measure developed by the Nobel Laureate William Sharpe. Markowitz (2009), the founder of Modern Portfolio Theory (MPT), suggested that investors choose optimum portfolios on the basis of their expected return and risk characteristics. As noted above, the overall risk of a portfolio is measured by the standard deviation of its returns. Sharpe used this concept to build a "reward to variability" ratio which has become known as the Sharpe Index. The metric is calculated using standard deviation and excess return (i.e. return above a risk free investment) to determine reward per unit of risk. The higher the Sharpe ratio, the better is the fund's historical risk-adjusted performance. In theory, any portfolio with a Sharpe index greater than one is performing better than
the market benchmark.

**Jensen's Alpha (2012)** Jensen's Alpha is also a reward to risk measure. However, it uses a different concept of risk. This measure's framework is taken from the capital asset pricing model (CAPM). In this model, among the assumptions, it is taken that every investor holds a diversified portfolio. This allows investors to diversify away some of their investment risk, leaving them exposed only to 'systematic' or non-diversifiable market-related risk. Jensen's Alpha uses only systematic risk for scaling a portfolio's return. Alpha measures the deviation of a portfolio's return from its equilibrium level, defined as the deviation of return from the risk, adjusted expectation for that portfolio's return. For ranking purposes, the higher the alpha, the better is the performance. The fund beats the market, on a systematic risk adjusted basis, if Jensen's Alpha is greater than zero, and vice versa.

**Treynor Index (2012)** A third performance measure is the Treynor index. This is calculated in the same manner as the Sharpe index, using excess returns on the fund, but the excess return on the fund is scaled by the beta of the fund, as opposed to the funds' standard deviation of returns.

Of these three traditional measures, the regression-based Jensen's Alpha is most commonly used in academic research. It provides a measure of whether a manager beats the market, as well as suggesting the magnitude of over/under performance (cited in FMRC Report, 2003 prepared for the Australian Securities & Investment Commission, Sydney)

**Literature on Performance Studies done Abroad-A Brief Review of Important Studies**

The path breaking works of Sharpe (2006), Treynor (2007), Treynor and Mazuy (2008), Jensen (1968), Fama (2009), Merton (2010), Henriksson and Merton
(2011), Henriksson (2012), and those of other researchers are widely acknowledged and used by academics and practitioners in performance evaluation of managed portfolios. The later studies have made several refinements, up-gradation, and extension of earlier works in terms of methodology, coverage and estimation.

The pioneering work on the mutual funds in U.S.A. was done by Friend, et al., (1962) in Wharton School of Finance and Commerce for the period 1953 to 1958. They made an extensive and systematic study of 152 mutual funds and found that mutual fund schemes earned an average annual return of 12.4 percent, while their composite benchmark earned a return of 12.6 percent.

Treynor (2012) developed a methodology for evaluating mutual fund performance that is popularly referred to as reward to volatility ratio. This measure has been frequently used both by researchers and practitioners for performance evaluation of mutual funds. The approach developed by Treynor takes beta or systematic risk to assess the premium per unit of risk.

Sharpe (2011) who developed a composite measure that considers return and risk evaluated the performance of 34 open-ended mutual funds during the period 1944-63 by the measures developed by him. He concluded that the average mutual fund performance was distinctly inferior to an investment in the Dow Jones Industrial Average (DJIA)

Treynor and Mazuy (2010) evaluated the performance of 57 fund managers in terms of their market timing abilities and found that, fund managers had not successfully outguessed the market. The results suggested that, investors were completely dependent on fluctuations in the market. The study adopted Treynor's (1965) methodology for reviewing the performance of mutual funds.

Jensen (2012) developed a composite portfolio evaluation technique
concerning risk-adjusted returns. He evaluated the ability of 115 fund managers in selecting securities during the period 1945-66. Analysis of net returns indicated that, 39 funds had above average returns, while 76 funds yielded abnormally poor returns. Using gross returns, 48 funds showed above average results and 67 funds below average results. Jensen concluded that, there was very little evidence that funds were able to perform significantly better than expected as fund managers were not able to forecast securities price movements.

Smith and Tito (2011)\textsuperscript{17} reviewed three widely used composite measures of investment performance and examined their inter-relationships and put forward another alternative measure which was then compared empirically. While ranking the funds on the basis of ex-post performance, the alternative measure produced little difference in performance. In contrast, when performance comparisons were made with the market, their conclusions differed significantly. In view of this, the alternative measure suggested by them was referred to as the modified Jensen measure.

Fama (2012)\textsuperscript{18} developed methods to distinguish between observed return due to the ability to pick up the best securities at a given level of risk from that of predictions of price movements in the market. He introduced a multi-period model allowing evaluation on a period-by-period basis and also on a cumulative basis. He was of the opinion that, return on a portfolio constitutes of return for security selection and return for bearing risk. His contributions combined the concepts from modern of portfolio selection and capital market equilibrium with more traditional concepts of good portfolio management.

The research work by Friend, et al., (1962), Sharpe (1966), Treynor and Mazuy (1966), Jensen (1968), and Tito (1969) and Fama (1972)\textsuperscript{19} 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 a number of research work followed. The following are the noteworthy studies carried out by academicians in the years to follow.

Friend, Blume and Crockett (1970)\textsuperscript{20} compared the performance of 86 funds with random portfolios. The study concluded that, mutual funds performed badly in terms of total risk. Funds with higher turnover outperformed the market. The size of the fund did not have any impact on their performance.

Robert Carlson’s (1970)\textsuperscript{21} examined the overall performance of mutual funds during the period 1948-1967. However, he laid emphasis on analyzing the effect of using different indices, as a proxy for the market over different time periods. He reported that fund performance relative to the market varied depending upon which index was used for the market viz., S&P 500, NYSE Composite, or DJIA. He also analyzed performance relative to size, expense-ratio, and a new-funds factor. The results indicated no relationship with size or expense ratio, although there was a relationship between performance and a measure of new funds factor.

Klemosky (1973)\textsuperscript{22} analyzed investment performance of mutual funds using quarterly returns for 40 funds during the period 1966-1971. He identified some bias in Sharpe, Treynor, and Jensen measures. He suggested that these could be removed by using mean absolute deviation and semi-standard deviation as risk surrogates. In his opinion, the resultant performance measure was found to be a better measure of risk adjusted performance measure than the composite measures derived from the capital asset pricing model.
Gupta and Manak (1974) evaluated the performance of select mutual funds by classifying them into various subgroups in terms of their broad investment objectives for the period 1962-71. For this purpose, he used performance measures suggested by Sharpe, Treynor, and Jensen. It was shown that return per unit of risk varied with the level of volatility assumed and that funds having higher volatility exhibited superior performance than the others. It was also reported that all fund types outperformed the market irrespective of choice of market index and performance measure.

McDonald (1974) examined the performance of 123 mutual funds in relation to the stated objective of each fund. The results indicated a positive relationship between fund objectives and risk measures thereby implying that a fund's risk increases when it becomes more aggressive.

Klemosky (1977) examined the performance of 158 mutual funds to see whether there was a consistency in performance of fund managers for the period 1968-1975. For this purpose, he studied rank correlation over different two-year and four-year periods. The results showed some consistency in performance between four-year periods, and relatively low consistency between adjacent two-year periods.

Henriksson and Merton (1981) developed a statistical framework for both parametric and non-parametric tests of market timing ability of fund managers.

Henriksson (1984) evaluated performance in terms of market timing abilities with sample of 116 open-ended investment schemes during the period, February 1968 June 1980. The empirical results obtained indicated unsatisfactory timing skills of the fund managers.

Markowitz (1991) noted that typical investor wants "higher returns" and "returns to be as certain as possible", i.e., investor seeking both to "maximise
expected returns" and "minimise uncertainty" (i.e., risk) has two conflicting objectives that must be balanced against each other when investing at time $t=0$. In other words, fund managers are expected to trade-off between the risk and return.

Grinblatt and Titman (1994)\textsuperscript{29} reported that mutual fund performance evaluation measures generally yielded similar inferences with the same benchmark. However, inferences vary even from the same measure with different benchmarks. The analysis of determinants of fund performance revealed that tests employing fund characteristics such as net asset value, load, expenses, portfolio turnover, and management fee reported better performance results. It was interesting to find significant positive relationship between turnover and ability of fund managers to earn abnormal returns.

Grubber (1996)\textsuperscript{30} attempted to study the puzzle relating to the fast growth of mutual funds in spite of inferior performance of actively managed portfolios. The study revealed that, mutual funds had negative performance compared to the market and provided evidence of persistence of underperformance. Sophisticated clientele withdrew money from mutual funds during the period of poor performance, where as mutual funds found money from disadvantaged clientele leading to the faster growth of funds.

Modigliani and Modigliani (1997)\textsuperscript{31} developed a measure that is closely related to the Sharpe ratio. It operates on the concept that a scheme’s portfolio can be levered or delivered to reflect a standard deviation that is identical with the market. The return that this adjusted portfolio earns is called M2 .Since the standard deviation has been equalized, M2 can be directly compared with the market.

Arugaslan et.,al (2005)\textsuperscript{32} seeks to evaluate the risk-adjusted performance of
the largest US-based equity mutual funds using rigorous analysis grounded in modern portfolio theory and present the results in a manner which is comprehensible to a lay investor. The results show that the funds with the highest returns may lose their attractiveness once the degree of risk had been factored into the analysis. Conversely, some funds may look very attractive once their low risk is factored into their performance. Recent research has utilized non-market factors like size, book-to-market, momentum, number of securities, and turnover to assess mutual fund performance (Carhart, 1997; Daniel et al., 1997; Kothari and Warner, 2001). (cited in Arugaslan et al. 2008)

**Literature on Indian Funds' Performance**

The performance measures used in the studies are (either independently or in combination) rate of return, benchmark comparison, risk-adjusted returns (Sharpe, Treynor, Jensen Alpha, and Eugene Fama). 'Stock selectivity' abilities and 'market timing' skills of the fund managers have not been reviewed because it is beyond the scope of the study.

**Gupta (1981)**33 had laid the foundation of performance evaluation with his study on performance of Indian equities. This pioneering study in the Indian context has been a major contribution in the field and is regarded as the benchmark on the rate of return on equities for the specified time. He laid the basis of rate of return concept in performance evaluation.

**Immediately thereafter, Jain (1982)**34 evaluated performance of Unit Trust of India (UTI) during 1964-65 to 1979-80, including the profitability aspects of Unit Scheme 1964, Unit Scheme 1971 and Unit Scheme 1976. He concluded that its real rate of return have been low indicating overall poor performance of UTI schemes. There has been no significant increase in the profitability over the years. His work is
considered as the first notable work on performance evaluation of mutual funds in India.

In 1986, UTI floated the first diversified equity fund in India, namely, Master share under the banner of its subsidiary, UTI (Mutual Fund) subsidiary, 1986. Thereafter considerable interest has been shown by the analysts, academicians and researchers to examine the financial performance of equity mutual funds in India from the perspective of investors and the fund managers.

Barua and Verma (1991) evaluated the performance of 'MasterShare', India's first 7-year close-end equity mutual fund of UTI. They employed the Capital Asset Pricing Model (CAPM) and computed the risk adjusted performance by employing Sharpe, Treynor, and Jensen ratios. The bench mark selected was the 'Economic Times Ordinary Share Price Index. The study concludes that, 'Master Share' has performed better in systematic risk, not in terms of total risk.

Obaidullah and Sridhar (1991) evaluated the performance of two major growth oriented mutual fund schemes -Mastershare and Canshare. They concluded that both these funds provided abnormal returns. Mastershare outperformed on a total-risk adjusted basis while Canshare did on a market risk-adjusted basis.

Adhikari and Bhosale (1994) evaluated the relative performance of eleven growth schemes in terms of various performance measures (Sharpe, Treynor, Jensen and Fama's measures.) for February 1992 to May 1994 utilising monthly NAV data. They reported that some of the sample schemes outperformed the relevant benchmark portfolio.

Ajay Shah and Susan Thomas (1994) studied the performance evaluation of 11 mutual fund schemes on the basis of market price data and concluded that except one scheme (UGS 2000 of UTI) other schemes earned inferior returns than the
market in general

Jaideep and Sudipta Majumdar (1994) evaluated the performance of five growth oriented schemes for the period February 1991 to August 1993. They have employed the CAPM and Jensen measure to evaluate the performance. They have evaluated the boom period performance of the schemes during the first quarter of 1992 by employing the Jensen model. They conclude that the selected mutual funds schemes have not offered superior returns during the period of study than the market in general. However they conclude that in the boom period the funds performed well.

Shome (1994) reported that average rate of return of selected Indian mutual funds was marginally lower than that of the benchmark portfolio (BSE Sensex). However, he reported that the risk measure of the majority of funds was higher than that of the benchmark portfolio. This implies that the fund managers were taking larger risk but were generating lower returns.

Shukla and Singh (1994) tested the proposition whether portfolio manager's professional education resulted in superior performance. They reported that equity mutual funds managed by professionally qualified managers were riskier but better diversified than those managed by others. The study also pointed out that these fund managers outperformed others as a group though the difference in performance was not found to be statistically significant.

Vaid (1994) looked at the performance in terms of the ability of the mutual fund to attract more investors and higher fund mobilization. It shows the popularity of the mutual fund as it is perceived to pay superior returns to the investors. She concludes that even for equity-oriented funds, investment is more in fixed income securities rather than in equities, which is a distortion.

Kale and Uma (1995) evaluated the performance of 77 mutual fund
schemes managed by eight mutual funds. The rates of return were compared with the return on the BSE National Index over the sample period to assess the performance of the scheme vis-a-vis, the market. It was found that the schemes proved worth their objectives, in that Growth schemes yielded an average of 47 percent, Tax planning 30 percent, Balanced Schemes 28 percent, and Income Schemes 18 percent CARG respectively.

Kaura and Jayadev (1995) evaluated the performance of growth-oriented scheme by using Jensen, Treynor and Sharpe measures and found that the schemes have not performed well.

Sarkar and Majumdar (1995) evaluated financial performance of five close-ended growth funds for the period February 1991 to August 1993, and concluded that the performance was below average in terms of alpha values (all negative and statistically not significant) and funds possessed high risk. No reference was provided about the timing parameters in their study.

Jaydev (1996) evaluated performance of two schemes during the period, June 1992 to March 1994 in terms of returns/benchmark comparison, diversification, selectivity and market timing skills. He concluded that the schemes failed to perform better than the market portfolio (ET’s ordinary share price index). Diversification was unsatisfactory. The performance did not show any signs of selectivity and timing skills of the fund managers.

The Delhi-based Value Research India Pvt. Ltd (1996) conducted a survey covering the bearish phase of Indian stock markets from 30 June 1994 to 31st December 1995. The survey examined 83 mutual fund schemes. The study revealed that, 15 schemes provided negative returns, of which, 13 were growth schemes. Returns from income schemes and income-cum-growth schemes were more than 20
percent. From the point of risk-adjusted monthly returns, of the 53 growth schemes, 28 (52.8 percent) could beat the index even in a bear phase. (Cited in Sadhak, H(1997)

Yadav R A and Mishra, Biswadeep (1996) evaluated 14 close end schemes over the period of April 1992 to March 1995 with BSE National Index as benchmark. Their analysis indicated that, 57 percent of sample schemes had a mean return higher than that of the market, higher Sharpe Index and lower Treynor index. Schemes performed well in terms of diversification and total variability of returns but failed to provide adequate risk-premium per unit of systematic risk. Fifty seven percent had positive alpha signifying superior performance in terms of timing ability of fund managers.

Fund managers of growth schemes adopted a conservative investment policy and maintained a low portfolio beta to restrict losses in a rapidly falling stock market. Gupta and Sehgal (1997) evaluated mutual fund performance over a four-year period, 1992-96. The sample consisted of 80 mutual fund schemes. They concluded that mutual fund industry fared reasonably well during the period of study. The performance was evaluated in terms of benchmark comparison, performance from one period to the next and their risk-return characteristics. Fifty alphas were found positive and only three were statistically significant. The sample statistics related to Fama's measure indicate that 56 positive net selectivity alphas were found as against 50 for Jensen's selectivity measure. Fama's measure is analogous to finding positive alphas applying Jensen's measure. Both give same results that the majority of the funds have outperformed the benchmark returns.

Sahadevan and Thiripalraju (1997) attempted to compare the performance of funds using total return, consistency and volatility. They did not attempt to use any CAPM single or multifactor models. Their study covered private and public sector
mutual funds for the period 1995-96. The benchmark used was the BSE National Index in terms of absolute returns. Out of 32 public sector funds, 11 outperformed the index. In the case of private sector mutual funds nine out of the ten studied outperformed the index. The study of course did not intend to go into deeper risk return analysis and compared a host of different types of funds to a Single index.

**Jayadev M (1998)** evaluated the performance of 62 mutual funds schemes using monthly NAV data for varying period between 1987 - March, 1995. He reported superior performance for bulk (30 out of 44) of the sample schemes when total risk was considered. However, in terms of systematic risk only 24 out of 44 schemes outperformed the benchmark portfolio. He also found that Indian mutual funds were not properly diversified. Further, in terms of Fama's measure, he did not find selectivity ability of the fund manager.

**Chakrabarti and Harsha Rungta (2000)** attempted to identify and evaluate the performance of mutual funds with focus on private sector equity funds. It studies the risk-return characteristics of selected major equity-based private mutual funds companies. The inference of the study reveals that there is no one-to-one correspondence between performance by return and performance by risk-adjusted returns.

**Amitabh Gupta (2001)** evaluated selected schemes with respect to the broad based BSE National Index to find out whether the schemes were able to beat the market. He also examined whether the returns were commensurate with the risk undertaken by the fund managers. The study also tested the market timing abilities of the fund managers. The results indicate that 38 schemes' (52%) earned higher returns in comparison to the market return while the remaining 35 schemes (48%) generated lower returns than that of the market.
Mishra (2001) evaluated performance over a period, April 1992 to December 1996. The sample size was 24 public sector sponsored mutual funds. The performance was evaluated in terms of rate of return, Treynor, Sharpe and Jensen's measures of performance. The study also addressed beta's instability issues. The study concluded dismal performance of PSU mutual funds in India, in general, during the period, 1992-96.

Turan M.S, Bodia B.S and Sushil Kumar Mehta (2001) analyzed the performance of 54 listed schemes of mutual funds on the basis of weekly data on NAVs. For this purpose, besides risk and return analysis, the risk adjusted performance measures have been employed. The study reveals that a considerably low level of risk is associated with the selected schemes, irrespective of the sector concerned.

Narayan Sapar R and Madava R. (2003) conducted a research on the performance evaluation of Indian mutual funds in a bear market through relative performance index, risk-return analysis, Treynor's ratio, Sharpe's ratio, Jensen's measure, and Fama's measure during the period September 1998-April 2002 (bear period). They started with a sample of 269 open ended schemes (out of total schemes of 433) for computing relative performance index. Then after excluding the funds whose returns are less than risk-free returns, 58 schemes were used for further analysis. The results of performance measures suggest that most of the mutual fund schemes in the sample of 58 were able to satisfy investor's expectations by giving excess returns over expected returns based on both premium for systematic risk and total risk.

performance in terms of six performance measures and the results indicate that the fund managers have not been successful in reaping returns in excess of the market.

Sondhi H J and Jain P K (2005) examined 17 public and 19 private sector mutual fund equity schemes. The mean and median returns for the aggregate period (1993-2002) were lower than the returns on 364 days treasury bills, and higher than the BSE 100 index. Private equity schemes had superior performance due to its popularity, fund management practices, well-researched stock selection and timing skills. More than three-fourth of public sector schemes were unable to achieve better returns in spite of higher investor confidence associated with high safety. The funds did not show consistency in performance.

Kaushik Bhattacharjee and Bijan Roy (2006) study is a replication of the study conducted by Grinblatt & Titman and calculates PCM for a sample of 50 Indian mutual funds over a period of 26 months, with a view of validating their study in the Indian context whether or not the selected mutual funds are able to outperform the market on the average over the studied time period. The study finds that though in the short term, the mutual funds were unable to generate above-normal return, on the average the combined PCM of all the mutual funds is significantly different from zero, which are in agreement with the original findings of Grinblatt & Titman, in the Indian context.

Muthappan P K and Damodharan E (2006) evaluated 40 schemes for the period April 1995 to March 2000. The study identified that majority of the schemes earned returns higher than the market but lower than 91 days Treasury bill rate. The average risk of the schemes was higher than the market. Fifteen schemes had an above average monthly return. The risk and return of the schemes were not always in conformity with their stated investment objectives. The sample schemes were not
adequately diversified, as the average unique risk was 7.45 percent with an average diversification of 35.01 percent. Twenty three schemes outperformed both in terms of total risk and systematic risk, 19 schemes with positive alpha values indicated superior performance. The study concludes that, the Indian Mutual Funds were not properly diversified.

Panwar S and Madhumathi R. (2006)\(^{61}\) in their study used a sample of public-sector sponsored & private-sector sponsored mutual funds of varied net assets to investigate the differences in characteristics of assets held, portfolio diversification, and variable effects of diversification on investment performance for the period May 2002 to May 2005. The study found that public-sector sponsored funds do not differ significantly from private-sector sponsored funds in terms of mean returns percentage. However, there is a significant difference between public-sector sponsored mutual funds and private-sector sponsored mutual funds in terms of average standard deviation, average variance and average coefficient of variation.

Rao D.N (2006)\(^{62}\) The study classified the 419 open-ended equity mutual fund schemes into six distinct investment styles, analyzed the financial performance of select open-ended equity mutual fund schemes for the period 1st April 2005 -31st March 2006 pertaining to the two dominant investment styles and tested the hypothesis whether the differences in performance are statistically significant. The variables chosen for analyzing financial performance are: monthly compounded mean return, risk per unit return and Sharpe ratio. The analyses indicated that Growth plans have generated higher returns than that ‘Of Dividend plans but at a higher risk and the differences were statistically significant. The most important finding of the study had been that only four Growth plans and one Dividend plan (5 out of the 42 plans studied) could generate higher returns than that of the market which is contrary to the
general opinion prevailing in the Indian mutual fund market.

Debashis Acharya and Gajendra Sidana (2007) attempt to classify hundred mutual funds employing cluster analysis and using a host of criteria like the 1 year total return, 2 year annualized return, 3 year annualized return, 5 year annualized return, alpha, beta, R-squared, sharpe's ratio, mean and standard deviation etc. The data is obtained from Value research online. They find evidences of inconsistencies between the investment style/objective classification and the return obtained by the fund.

Deepak Agrawal (2007) in his paper provides an overview of mutual fund activity in India. He also analyzes data at both the fund-manager and fund-investor levels. The study revealed that the performance of the Mutual Fund Industry in India is affected by saving and investment habits of the people on one hand and on the second side, the confidence and loyalty of the fund Manager.

Soumya Guha Deb (2008) focuses on return-based style analysis of equity mutual funds in India using quadratic optimization of an asset class factor model proposed by William Sharpe. The study analyzes the relative performance of the funds with respect to their style benchmarks. The results of the study show that the funds have not been able to beat their style benchmarks on the average.

Rao D.N. and Rao S.B. (2009) conducted research on the general perception among Indian Investors and Fund Managers that (A) Market outperforms Balanced and Income Funds during Bull run (B) Balanced and Income Funds outperform the stock market during Bear run (C) Market outperforms Balanced and Income Funds over a long holding period (a minimum period of three years). The objective of the study was to empirically investigate whether the above stated perceptions are valid in the Indian context. For this purpose, six hypotheses were
tested. The performance of the Balanced and 72 Income Funds were analyzed in terms of Return, Risk, Return per Risk and Sharpe ratio over the three years, 2006, 2007 and 2008 during which period the Indian Stock Market had witnessed much volatility. Further, the performances of these funds were compared with that of the Market and Benchmark Indices. The Null Hypotheses were rejected leading to the acceptance of Alternate Hypothesis in all the six cases. This led to the conclusion that the Market outperformed both the Balanced and Income Funds over Bull Run and 3 year period while both the funds outperformed the Market over Bear run period which confirms the popular belief of the Investors and Fund Managers in India.

Lakshmi (2010) examined the performance of mutual fund growth schemes with growth options launched in the year 1993 and continue to be in operation under the regulated environment. During the eight years of study period, the sample schemes outperformed the market in terms of absolute returns. The sample schemes did not provide adequate return in terms of systematic risk and unsystematic risk.

The Indian studies, it is found, tend to focus on using evolving techniques to study of fund performance. The empirical evidence presented in these studies can be used as input in decision making by investors who are exploring the possibility of participating in the stock market via mutual funds, but are not sure of what selection criteria to employ.

SECTION: 2
Individual Investor Behaviour Studies

There is a considerable body of work on individual investor investment behaviour from the field of behavioural economics done abroad. Individuals' investment behaviour has been explored through a large body of empirical studies. In the Indian context, there are a few studies that analyze different aspects of mutual
fund investor behaviour through primary survey. Very few researches have considered drawing descriptive inference of the consumer behaviour vis-a-vis the selection of mutual fund scheme. (Kiran Kumar and Poonam Mehra, 2010) In this context, Capon et al. (1996) in an exploratory study based on 3000 mutual fund investors in the US consider the relationship between four sets of variables, namely, information sources used for mutual fund purchases, criteria used to select between alternative mutual funds, mutual fund purchase behaviour and consumer demographic data. My research draws a lot from the research of Capon et al.

Literature Review for Identification of Information Sources, Selection Criteria Attributes, Channel Preference, Financial Asset Preference and Investment Objective of Individual Investors

This literature review relating to individual investor behaviour focuses on certain key areas like - What information do investors use to make good fund selection choices? What are the sources of information? What are their investment objectives?

What are their financial asset preferences? What is the channel they use to buy their mutual funds? etc., a number of papers both Indian and Foreign, contain possible clues in this regard.

Review of Studies done Abroad

1990 Consumer Reports Survey of mutual fund investors found that, although past performance and level of risk (safety) were rated the two most important factors in aggregate; several additional factors were also relevant: i.e. amount of sales charge, management fees, fund manager reputation, fund family (e.g.
Fidelity, Vanguard), clarity of the fund's accounting statement, recommendation from a financial magazine or newsletter, availability of telephone switching, funds already owned in that family and friends' recommendation.(cited in Capon et.al.,1994).

Ippolito (1992)\(^7\) reported that fund selection by investors is based on past performance of the funds and money flows into winning funds more rapidly than they flow out of losing funds.

Noel Capon, Gavan J. Fitzsimons and Rick Weingarten (1994)\(^7\), in their paper titled "Affluent Investors and Mutual Fund Purchases" probe affluent investor mutual fund investment decisions. They developed several different investor profiles from data on approximately 300 affluent investors. These investor types differ in sources of information regarding mutual fund investments, particularly the use of financial advisers, and in the selection criteria employed for mutual fund purchases. In addition, they have distinguishable mutual fund behaviour and demographic characteristics.

Capon, Fitzsimons and Prince (1996)\(^7\) examined the investment choice of individuals in U.S. mutual funds, in particular the use of non-performance-related variables in making fund choice using a consumer behaviour framework that is, using constructs of information source, selection criteria and purchase. Through a survey of mutual fund investors, published historical return performance rankings were identified as the most important information source used by investors, followed by fund advertising. The performance track record was the most important selection criteria used by investors and the manager's reputation and the number of funds within the fund group were of above average importance. Goetzman and Peles (1997)\(^7\) established that there is evidence of investor psychology affecting fund/scheme selection and switching.
Thomas S. Howe and Ralph A. Pope (1996) investigated the usefulness of Forbes equity fund performance ratings in predicting future mutual fund returns. Specifically, this study examined the relationships between (1) a fund's Forbes equity fund rating and its performance during subsequent periods and (2) the predictive ability of Forbes equity fund ratings and the investment horizon. Results suggest that Forbes up-market ratings would have helped predict betas but would have been of little use in predicting future fund performance. Forbes down-market ratings may have helped predict fund returns over the following year and fund risk-adjusted returns over periods greater than one year.

Gordon J Alexander Jonathan D. Jones and Peter J Nigro (1997) using survey data on a random sample of 2000 mutual fund investors, classify investors by their level of financial literacy and their place of mutual fund purchase. After using a profit model to separately estimate the determinants of an investor's choice of distribution channel and level of financial literacy, a bivariate probit model that jointly endogenizes an investor's level of financial literacy and choice of distribution channel is estimated. Strong evidence that an investor's level of financial literacy and choice of distribution channel are jointly determined is found. Thus, the hypothesis put forth in this paper that investors self-select into different distribution channels based on their overall level of financial literacy is supported by the data.

Miranda Lam (1999) investigated whether an investment strategy based on mutual fund rankings by the popular press can earn abnormal returns. The sample contains 757 funds that have received rankings from Barron's, Business Week, and Forbes between 1993 and 1995. This study shows that an investment strategy based on popular mutual fund rankings did not produce superior performance. The ranked
funds have higher excess returns relative to peer funds during the pre-ranking period, but have similar excess returns as their peers in the post-ranking period.

Brad Barber, Terrance Odean and Luzhing (2000)\textsuperscript{77} have conducted a comprehensive research titled "The Behaviour of Mutual Fund Investors". The researchers have analyzed over 30,000 households with accounts at a large U S discount broker, for mutual fund purchase and sale decision. Based on the finding, three primary results have been documented—Investors are likely to buy funds with strong past performance and over half of all fund purchases occur in funds ranked in the top ranking of past annual returns; Investors are likely to sell funds with strong past performance and are reluctant to sell their losing fund investments; Investors are likely to be more sensitive to the form in which fund expenses are charged, though investors are less likely to buy funds with high transaction costs.

Goldstein and Krutov (2000)\textsuperscript{78} argue that investors pay less attention to expenses when returns are above historical norms, because they care about fees relative to returns, not fees per se.

Shu, Yeh and Yamada (2002),\textsuperscript{79} conducted a study by investigating the investment flows of equity mutual funds in Taiwan, to identify if there are different patterns in buy and sell behaviour of mutual funds. For this purpose, the data of open-end equity mutual funds from the Taiwan Economic Journal from November 1996 to October 1999 was considered. The results showed there is a stark difference in the behaviour of investors who invest small amounts of money and those who invest large amounts in mutual funds. The findings suggest that searching cost might be an important factor that affects investor decisions. Small investors who are more likely to be small household investors, are prone to buy large mutual funds that are well known, while large investors tend to buy small funds that might require a costly
search.

Bala Ramasamy, Matthew C. H. Yeung (2003)\(^{80}\) surveys the relative importance of factors considered important in the selection of mutual funds by financial advisors in emerging markets. The survey focuses on Malaysia. The results of the survey point to three important factors which dominate the choice of mutual funds. These are consistent performance, size of funds, and costs of transaction. Factors which relate to fund managers and investment style are not considered to be relatively important. The study employs conjoint analysis to design the questionnaire and evaluate the perception of the financial advisors.

Wilcox and Ronald (2003)\(^{81}\) are of the opinion that investors who wish to purchase shares in mutual funds, balance many types of information, from a variety of sources when making their fund selection. This research examines how investors choose a mutual fund within a given class of funds. They provide experimental evidence, which indicates that consumers pay close attention to fees when selecting mutual funds. Among the major findings are that, investors pay a great deal of attention to past performance and vastly overweight loads relative to expense ratios when evaluating a fund's overall fee structure. They also find evidence that investors with a greater knowledge of basic finance and highly educated consumers, made poorer not better fund decisions, than their not so financially savvy counterparts, suggesting the direction in which investor education should be targeted.

Xue-jun, YANG Xiao-Ian, (2003)\(^{82}\) quote in their study that investors can make decisions on the basis of the funds' objectives. That assumes, activities of mutual funds are consistent with their stated objectives. However, if the stated objectives are not the actual objectives the funds pursue, conclusions drawn by investors and researchers based on the stated objectives will be misleading. Kim et
al.(2000) classified funds based on their attributes (characteristics, investment style, and risk/return measures). They concluded that the stated objectives of more than half the funds differed from their attributes-based objectives, and over one third of the funds were severely misclassified (Kim et al., 2000).(cited in LIN Xue-jun, YANG Xiaolan,2003) The authors in their study conclude that there is no significant difference between different objective groups, and 50 percent of mutual funds are not consistent with their objective groups.

One possible problem in mutual fund selection is the question of whether the performances of large and small funds are different. Using the data for the period 1975-1984 and Jensen's criterion, Grinblatt and Titman (1989) demonstrated that small mutual funds have a better performance than the large ones. Despite the view that large mutual funds yield high performance as additional information about them is accessible through further research and investors incur lower expenses due to their volumes (sizes), it is argued that small-scale funds may exhibit superior performance largely because of their flexible structures and their intolerance to high operation costs for diversification (Haslem, 2003, cited in Onur G6zba§1, Levent C;ltak (2010)§3.

Cashman, Deli, Nardari and Vilupuram (2004)§4 find that investors evaluate and respond differently to past performance across fund types such as domestic equity funds, international equity funds and hybrid funds.

Paul Gerrans (2004)§5 examines the use and understanding of managed fund ratings in Australia. The analysis presented in this paper suggests that managed fund ratings have become an important and relied-upon feature of the Australia managed fund industry for individual retail investors. A sample of individual investors from the Australian Shareholder Association suggests that 75% of respondents used either fund ratings alone, or ratings in conjunction with performance-based rankings.
Despite the disclaimers issued by investment funds and regulators about past performance not being an indicator of future performance, investors do use past performance as one of their most important guides (Rainmaker, 2004). Empirical research provides conclusive evidence that investors continually direct investments into funds that have had recent superior performance and out of those that have had recent poor performance (Kane et al., 1991; Patel et al., 1992; Sawicki, 2000, cited in Nigel Finch 2005).


Bruce A. Huhmann and Nalinaksha Bhattacharyya (2005), in their study examine how information in mutual fund advertisements aimed at consumers, conforms to theories from the discipline of finance regarding the information consumers require when making investment decisions. The findings of the study show that mutual fund advertisements are not providing the information necessary for optimal investment decisions. Most (88.8 per cent) of mutual fund advertisements do not contain all the requisite information on the risk-return trade-off, principal-agent conflict, and transaction costs that consumers need, to optimize their investment decisions.

Keli (2005) is of opinion that Past performance and Fund's Investment Strategy continued to be the top two drivers in the selection of a new fund manager.

Nigel Finch (2005), examined the role that impersonal data disclosure plays in the selection and retention of Australia's 2,637 retail equity investment funds. They find that fund size, past performance, agency ratings, and the management expense ratio (MER) are widely used by retail investors in investment decision making, but
conclude that the only disclosure that provides any valuable utility to a retail investor is the MER. As such, the MER should be the key selection criteria for retail investors when making choices regarding investment funds.

**Pingping Han, Sharon A. DeVaney, (2005)**\(^9^1\), in "Understanding Mutual Fund and Stock Investors" investigated which factors influence mutual fund and stock ownership of households in the 2001 Survey of Consumer Finances. Outside of their retirement accounts, only 17.9% and 21.75% of households own mutual funds and stocks, respectively. The results of logistic regression showed that risk tolerance, education, age, race, income, and homeownership were influential for the likelihood of owning both mutual funds and stocks, but there were some differences in regard to age and education. Those who own stock were likely to be older and to have more education. Also, being self-employed influence owning stock, but not mutual funds.

**In 2006, the ICI**\(^9^2\) undertook a comprehensive study to identify the information needs of mutual fund investors and the sources from which they obtain that information. A "key finding" of the survey, according to the ICI, is that investors consider a wide range of information before purchasing mutual fund shares. They most frequently review or ask questions about a fund's fees and expenses and its historical performance. 74% of those surveyed stated that they review a fund's fees and expenses before investing. The second most reviewed information is the fund's "historical performance," which 69% of surveyed investors stated they review, and the third is the "fund risks," which 61% of those surveyed said they review.

**Henrik Cronqvist (2006)**\(^9^3\) examines the role of advertising in the mutual fund industry and whether advertising affects investors' fund and portfolio choices. Content analysis shows that only a small fraction of fund advertising is directly informative about characteristics relevant for rational investors, such as fund fees. It
shows that fund advertising affects portfolio choices although it provides little direct or indirect information. These results are not consistent with traditional models in economics which emphasizes advertising’s information role.

Richard B. Evans, (2006)\textsuperscript{94} examines the importance of risk-adjusted versus total returns in mutual fund family investment offering and manager succession decisions. He presents evidence that suggests many mutual fund investors do not risk-adjust, from an analysis of the decisions of fund families who observe their investing behaviour. Many investors use total return, an intuitive and readily available performance measure, when making mutual fund investment decisions.

Bergstresser et al. (2007)\textsuperscript{95} compared fund choices from 1996-2004 by fund investors who bought through direct channels and by those who bought through brokers. They found that brokers directed investors toward funds with higher front-end loads and 12b-1 fees. Also, the larger a fund’s load and 12b-1 fee, the more flow it received from broker-directed investors. As a result, investors pay a steep price for using brokers. Bergstresser et al. estimated that, in 2002, investors paid up to U.S.$3.6 billion in front-end loads, U.S.$2.8 billion in back-end loads, and U.S.$8.8 billion in 12b-1 fees. However, they found little evidence that fund investors receive commensurate benefits from brokers.

Alan R Palmiter and Ahamed E Taha (2008)\textsuperscript{96} in their study examine the profiles of mutual fund investors presented by the mutual fund industry, by the SEC, and by an extensive empirical academic literature produced primarily by finance professors. The industry portrays fund investors as diligent, fairly sophisticated, and guided by professional financial advisers. The industry claims that the result is a competitive mutual fund market as fund investors demand low costs and solid performance. The SEC's regulatory policy paints a more cautious portrait of fund
Survey published by the US Securities and Exchange Commission (SEC), 2008 has found that retail investors rely heavily on financial advisors for their investment decisions and rarely use the SEC’s website or blogs for investment information. The survey found that while 51% of investors said their financial advisors or brokers were their "main source" of information, only 16% rated the Internet as their main source. And while 90% of investors have Internet access, just 56% use the Internet in their investment decisions. Fully 44% said they did not use it at all. Among those who do use the web for their investing, only 1% cited the SEC’s website as a source while 13% said they use blogs. The survey revealed that ownership of mutual funds is positively associated with the respondent’s income.

Bonparte (2009) proposes that financial decisions are influenced by information search methods. They report that investors who make their judgments solely based on informal search are willing to bear higher financial risks, invest in a fewer number of stocks, exhibit home-bias, a lower level of overconfidence and outperform investors who depend only on professionals. He also finds different search patterns based on region and wealth, and a complementary relationship between financial risk bearing and search efforts.

Onur Gozbaş, Levent Gltak (2010), Using conjoint analysis, this study investigates the relative importance of the attributes considered by Turkish portfolio managers and investment advisors in selecting mutual funds. It also investigates how the levels of these attributes are valued. The findings indicate that the attributes that matter the most are listed in their order of importance as expense ratio, past performance and experience of the fund manager. While the affiliation of the fund and size of the fund appear to be of moderate importance, it is found that investment
advisors and portfolio managers attach even less importance to the number of funds managed by a particular founder and the fund manager's investment style.

**Indian Studies**

A survey\(^{100}\) showed that a typical Indian mutual fund investor is actually a 45-year-old married man who is fickle minded about his investing. While there have been no gender related studies done in the past, this survey indicated that 92 percent of mutual fund investors were actually men. The average mutual fund investor is 45 years old. The age factor for Indian mutual fund investors almost resembled that of a developed country like the US. According to the survey, Indian MF investors were found to be fickle minded unlike the US investors.

According to the latest *Nielsen Mutual Fund Brand Health Monitor 4*,\(^{101}\) which gauges consumer attitudes toward Mutual Funds, the profile for Mutual Fund investor has become much younger, with males in their mid 30s -rather than in their early 40s. They have an average monthly income of Rs.30, 000. Investors previously regarded Mutual Funds as a tax saving option but are now buying them in the hope of greater financial return.

*Saba Asish and Rama Murthy Y Sree (1993-94)*\(^{102}\) identified that return, liquidity, safety and capital appreciation played a predominant role in the preference of the schemes by investors.

*Kulshreshta (1994)*\(^{103}\) offers certain guidelines to the investors in selecting the mutual fund schemes.

*Radha (1995)*\(^{104}\) found that investors have certain primary objectives and gave importance to them while making investment plans. Capital appreciation was considered as the most important objective. It was also observed that investors'
investment objectives differed depending on their occupation and income.

**Shankar (1996)**\(^{105}\) points out that the Indian investors view Mutual Funds as commodity products and AMCs, to capture the market, should follow the consumer product distribution model.

**Madhusudhan V. Jambodekar (1996)**\(^{106}\) conducted a study to assess the awareness of Mutual Funds among investors, to identify the information sources influencing the buyer decision and the factors influencing the choice of a particular fund. The study revealed that income schemes and open-ended schemes are preferred over growth schemes and close-ended schemes during the prevalent market conditions. Investors look for safety of principal, liquidity and capital appreciation in order of importance. Newspapers and magazines are the first source of information through which investors get to know about Mutual Funds I Schemes and the investor service is the major differentiating factor in the selection of Mutual Funds.

**Sikidar and Singh (1996)**\(^{107}\) carried out a survey to understand the behavioural aspects of the investors of the North Eastern region towards mutual funds investment portfolio. The survey revealed that the salaried and self-employed formed the major investors in mutual fund primarily due to tax concessions. UTI and SBI schemes were popular in that part of the country then, and other funds had not proved to be a big hit during the time when the survey was done.

**Rajarajan (1997,1998,2000,2003)**\(^{108}\) has done extensive research on the characteristics of investors. He classified individual investors on their investment size and demographic characteristics. He also used cluster analysis to segment individual investors based on their lifestyles. He brought out details about the association between lifestyles of individual investors and their demographic and investment related characteristics to understand them and their financial product needs better.
Srinivasan (1997)\textsuperscript{109}, elicited opinion on investors’ choices over the investment avenues and found that the majority of investors favoured fixed deposits in banks, followed by post office schemes, insurance schemes, bonds issued by government organizations and equity shares. Mutual fund schemes were the least preferred. The survey also elicited information on the important factors that influence an investor to prefer one investment to another. Guaranteed return coupled with capital appreciation was the main expectation of most investors.

Somasundaram (1998)\textsuperscript{110} found that investors consider safety of investment followed by regular return and capital appreciation as important objectives while making an investment decision. Private sector employees gave more importance to returns, while government employees looked for tax benefits while choosing an investment option.

Sundar (1998)\textsuperscript{111} conducted a survey to get an insight into the mutual fund operations of private institutions with special reference to Kothari Pioneer. The survey revealed that the awareness about MF concept was poor during that time in small cities like Vishakapatnam. Agents play a vital role in spreading the Mutual Fund culture; opened schemes were much preferred. Age and income are the two important determinants in the selection of the fund/scheme; brand image and return are the prime considerations while investing in any Mutual Fund.

Khorana and Servaes (1999)\textsuperscript{112} in their study reported that the decision to introduce a new type of fund is affected by a number of variables, including investor demand for the fund's attributes.

Chakrabarti and Rungta (2000)\textsuperscript{113} stressed the importance of brand effect in determining the competitive position of the AMCs. Their study reveals that the brand image factor, though not easily captured by computable performance measures,
influences the investor's perception and hence his fund/scheme selection.

Shanmugham (2000)\textsuperscript{114} conducted a survey of 201 individual investors to study the information sourcing by investors, their perceptions of various investment strategy dimensions and the factors motivating share investment decisions, and reports that among the various factors, psychological and sociological factors dominate the economic factors in share investment decisions.

Tapan K Panda and Nalini Prava Tripathy (2001)\textsuperscript{115} have attempted to study various need expectations of small investors from different types of mutual funds available in Indian market and identify the risk return perception with the purchase of mutual funds. Various sophisticated multivariate techniques are applied to identify important characteristics being considered by the Indian investors in the purchase decision.

Venkatapathi Raju (2001)\textsuperscript{116} in his doctoral dissertation "Mutual Fund Perception of Urban and Rural Investors" assessed the investment preferences of urban and rural households, examined the awareness, perception and preferences of small investors towards mutual fund. As regards the asset preference, bank deposits were ranked one, followed by insurance policy, units of mutual funds, provident funds, National savings certificates, company shares, company debentures and company deposits. The investment objective was 'growth'. The growth objective becomes all the more important as the level of income increases.

Rajeshwari T.R and Rama Moorthy V.E (2002)\textsuperscript{117} studied the financial behavior and factors influencing fund/scheme selection of retail investors. The survey revealed that the most preferred investment vehicle is bank deposits. The investors look for safety first in mutual fund products, followed by good returns, tax benefits,
liquidity and capital appreciation. Investors are influenced by the intrinsic qualities of the product, followed by efficient management and general image of the fund/scheme. The survey revealed that the scheme selection decision is made by the respondents themselves. Newspapers and magazines, brokers and agents, television, suggestions from friends and direct mail in that order are the other sources influencing the choice of a mutual fund scheme.

Ranjith V.K (2002) attempted to understand investors' perception of risk, by classifying them into three groups-low risk takers, medium risk-takers and high risk takers. The influence of age, income, educational background and profession on risk preference was studied. The study reveals that a majority of the investors prefer to take moderate amount of risk while making investment decision and as age increases the tendency to take risk declines. Financial performance is the primary parameter by which investors make investment decisions.

Singh and Vanita (2002) conducted a study on mutual fund investors' perception and Preferences. The results showed that, as against UTI and other public sector mutual funds, the investors were increasingly moving towards private sector mutual funds. Absolute returns from mutual funds and name of promoters has been the basic criteria used for selecting mutual fund scheme. Public sector mutual fund investors are not satisfied with the performance of their mutual funds. A majority of the investors are not aware of the inherent risk in mutual fund investment. National Savings Certificates and Public Provident Funds were the most preferred financial assets. The investors preferred to invest in private sector funds which were in the nature of open-ended balanced schemes.

Jaspal Singh and Subhash Chander (2003) identified that past record and
growth prospects influenced the choice of scheme. Investors in mutual funds expected repurchase facility, prompt service and adequate information. Return, portfolio selection and NAV were important criteria’s for mutual fund appraisal. The ANOVA results indicated that, occupational status; age had insignificant influence on the choice of scheme. Salaried and retired categories had priority for past record and safety in their mutual fund investment decisions.

Qamar (2003)\textsuperscript{121} conducted a survey of 300 average urban middle class households in Delhi to find out the investment preferences of households that are able to save, and to identify the factors influencing saving behaviour and investment preferences. Results showed that there is a high propensity to save moderate to high proportions of the income. It was found that the level of literacy, educational achievement, occupational distribution and income profile of the respondents largely determine the savings and investment pattern.

Gran D. and Rao U.S. (2004)\textsuperscript{122} identified investor group segments using the demographic and psychographic characteristics of investors using two statistical techniques, namely - Multinomial Logistic Regression (MLR) and Factor Analysis.

Satish D (2004)\textsuperscript{123} opined that investors from seven major cities in India had a preference for mutual funds compared to banking and insurance products. Investors expected moderate return and accepted moderate risk. 60 percent of investors preferred growth schemes. The image of AMC acted as a major factor in the choice of schemes. Investors had the same level of confidence towards shares and mutual funds.

Venkateshwarlu M (2004)\textsuperscript{124} had analyzed investors from the twin cities of Hyderabad and Secunderabad. Investors preferred to invest in open-end schemes with growth objectives. Chi-squared value revealed that, the size of income class is
independent of preference pattern, and dependent on the choice of fund floating institution. Reasonable returns and long-term strategy adopted by the scheme were the criteria of scheme selection. Investors perceived that too many restrictions led to the average performance of mutual funds in India.

Rajeswari and Moorthy (2005) observed that investors demand inter-temporal wealth shifting as they progress through the life cycle.

Jaspal Singh and Subhash Chander (2006) reported that investors belonging to the salaried category, and in the age group of 20-35, years showed inclination towards close-ended growth (equity-oriented) schemes over the other scheme types. A majority of the investors based their investment decision on the advice of brokers, professionals and financial advisors.

Kavitha Ranganathan (2006) evaluated the behavioural aspects relating to fund selection by individual investors and also assessed the conceptual awareness of mutual funds. The study reveals that "Pension and Provident Fund" is the most popular savings instrument. Though mutual funds did not rank very high in the financial assets preference, among the mutual fund schemes there was a clear preference for open ended growth schemes. The features looked into while making an investment was return followed by safety, liquidity, tax benefits, capital appreciation, and professional-management and diversification benefits. Findings of the study also reveal that investors attach high priority to published information.

Xavier M J, Balasubramanian G and Viswanathan P K, (2006) demonstrates the use of conjoint analysis to map the preferences of mutual fund investors in the Indian context. The resultant utilities have been used to segment
investors into three major segments, the daredevils, the image-driven and the conservative.

**Bhagaban Das, Sangeeta Mohanty and Nikhil Chandra Shil (2008)** the study, sketches the behavioural pattern of retail investors towards two investment opportunities, i.e., mutual fund and life insurance. The brand image and the past performance of the Mutual funds are highly positively correlated. The Government servants invest more in life insurance and the private sector employees in Mutual funds. Forty percent of the investors view newspaper and magazines as the main source of information, while 6 percent of them depend on information got directly from the company.

**Saptarshi Purkayastha (2008)**, attempts to characterize and profile the individual investor in order to determine whether the variables - age, occupation, designation, income and dependents - impact the risk appetite of an investor. Some of the key findings are that age, salary and designation do impact the risk appetite of an investor. However, in reality, investors tend to invest in average risk mutual funds, irrespective of their demographics and risk tolerance.

**Vanniarajan T, Umayasalma Shajahan, and Archana, R (2008)** analyzed the factors influencing the investment in mutual funds and the factors which discriminate the different market segments. The study concludes that the important factors leading to investing in mutual funds are liquidity, savings, income, motivation and capital gain factor. Regarding the importance given to such factors, there is a significant difference among the retail and institutional investors.

**Parihar B. B. S, Rajeev Sharma and Deepika Singh Parihar, (2009)**, in "Analyzing Investors' Attitude towards Mutual Funds as an Investment Option" analyzed the impact of different demographic variables on the attitude of investors
towards mutual funds. Apart from this, the study also focuses on the benefits delivered by mutual funds to investors. To this end, 200 respondents of Agra region, having different demographic profiles were surveyed. The study reveals that the majority of investors have still not formed any attitude towards mutual fund investments. The main reason behind this has been observed to be the lack of awareness of investors about the concept and working of the mutual funds.

Kasilingam R and Jayabal G (2010)\textsuperscript{133} examined the criteria used by investors to evaluate an investment instrument. It is important for marketers to evaluate the investors and segment them based on their choice and know the characteristics of each segment of investors. The study identifies four commonly used criteria namely convenience, risk protection, return and liquidity. The authors argue that using these criteria, investors can be segmented into three categories namely, rational, normal and irrational based on the extent to which they consider each criterion. Rational people analyze any investment instrument by using all the criteria, whereas irrational people take investment decisions without considering any.

Syed Tabassum Sultana (2010)\textsuperscript{134} while discussing the characteristics of the Indian individual investors makes an attempt to discover the relationship between dependent variable Risk Tolerance level and independent variables such as age, gender of an individual investor.

Review of Reports and Surveys:

Gupta (1993)\textsuperscript{135} In a "Household Investor Survey" conducted in 1993, the Society for Capital Market Research and Development reported on the investment habits of households in India. The area of focus relates to Mutual Fund investors, seen in a broad perspective of households' investment preferences. Most of the analyses in
the study are based on the personal interviews covering 1755 households carried out over 19 States/Union Territories and 76 cities in India. The findings of the survey have been published in a book titled "Mutual Fund and Asset Preference". 

In 1994, The Unit Trust of India (UTI) commissioned MARG to conduct a macro survey on perceptions of individual investors. The study revealed that the primary reason for investing in UTI was the returns. Two-thirds of the respondents perceived it to be a totally safe and secure investment.

An attempt was made by the National Council of Applied Economic Research (NCAER) in 1964 to understand the attitude and motivation for the savings of individuals, for which a survey of households was undertaken. Another NCAER study in 1996 analyzed the structure of the capital market and presented the views and attitudes of individual shareholders. SEBI-NCAER survey (2000) was carried out to estimate the number of households and the population of individual investors, their economic and demographic profile, portfolio size, and investment preference for equity as well as other savings instruments. This was a unique and comprehensive study of individual investors, for, data was collected from 3, 00,000 geographically dispersed rural and urban households. Some of the relevant findings of the study are: Investors diversify their investment portfolio to balance risks. Safety and liquidity were the prime considerations which determined the choice of an asset. Households' preference for instruments matches their risk perception.

MFs are likely to increase:

A study titled "Market Scoping for Mutual Funds in India" by IIMS Data works, observes that, the retail mutual fund investor base is quite small at an estimated 5.3 million individual investors in 2007. A major explanation for this is low awareness levels of mutual fund investment opportunities in the retail investor base.
Take-up rates of mutual fund investments among the aware investor population are encouragingly high and if other investors with similar financial profiles to mutual fund investors were aware of mutual fund opportunities the size of the existing mutual fund investor base presently might be three times higher.

Results of the "Indian Asset Management Outlook Survey", \(^{140}\) conducted by Indian Chamber of Commerce and Ernst and Young describe the opinions of asset managers in the Indian Market. The key highlights of the finding are summarized below:

The Indian Chamber of Commerce and the Monitor Group, a global management consulting firm, in their report "Indian Mutual Fund Industry Vision 2015", \(^{141}\) traces the status of the mutual fund industry and explores the road ahead for the mutual fund industry. The highlights of the report are:

The strong growth of Indian mutual fund industry has been contributed by the retail and institutional segments alike. A growing economy and favourable regulatory reforms have acted as key drivers of growth. Mutual fund ADM has grown at a rapid CAGR of 47% over 2003-08 touching a high of INR 6 trillion or USD 150 billion. Retail segment has played a significant part in the growth, contributing to 40% of all mutual fund schemes and 82% of equity schemes. Backed by strong institutional investments, Income funds constitute about 43% of the industry ADM followed by retail led growth funds with 28% ADM share. However, retail penetration still remains very low in India with less than 2% of wage earners investing in mutual funds. The geographical penetration is also highly skewed in favour of top 12 cities (accounting for 75% of the retail AUM).

The Boston Consulting Group (BCG) and Computer Age Management Systems' (CAMS) report on the Equity Mutual Funds Industry\(^{142}\) focuses on equity
mutual funds in India and is based on detailed analyses of the equity mutual funds data with CAMS from 2003 to 2010. CAMS data is representative of the industry, with a wide variety of Asset Management Companies (AMCs) being represented in its portfolio his report analyzes equity mutual fund industry trends on the basis of customer behaviour, evolution of products, distribution mix and geographic reach. The study reveals that retail customers dominate Equity Assets under Management (ADM) funds with over 90 percent of the investment volume coming from ticket sizes of less than Rs 1 lakh. Retail products like systematic investment plans (SIPs) and equity linked savings scheme (ELSS) have grown dramatically over the past few years to become a substantial part of the ADM.

**The CII, Pricewaterhouse Coopers (PWC) Report, 2007**

"Indian Mutual Fund Industry: Emerging Opportunities and Challenges", released during the Mutual Fund Summit 2007, discussed the opportunities and challenges facing the Indian Mutual Fund Industry. It was highlighted in the report that product differentiation and quality service standards would be the key enablers which could make a difference between boom and gloom for fund houses. The efforts taken by the industry and AMPI towards investor education are definitely showing results. Fund houses have introduced interesting technological innovations such as transacting through the internet, net asset value updates on mobile phones, unit balance alerts via SMS messages, transacting through ATM cards etc.

**The en, pwe Report, 2008**

"Indian Mutual Fund Industry: Sustaining Growth in a Maturing Market" released during the Mutual Fund Summit 2008, outlines the changing and challenging landscape in which the Indian mutual fund
industry participants are currently operating. The year 2007-08 saw significant changes in the macro-economic, regulatory and business environment which would have lasting effects on the mutual fund industry. These changes have thrown up interesting challenges for the future.

Confederation of Indian Industry and KPMG, conducted a "Voice of the Customer Survey" covering a large representative sample of population from diverse back ground (age, education, occupation and gender) across 10 top cities in India in May 2009. The objective of the survey was to help understand the buying behaviour of existing and potential investors in Mutual Funds. The study revealed that the factors which impede the investment in mutual funds include, availability of large number of mutual fund schemes that makes investment decision complex and difficult, complicated 'know your customer' norms that restrict potential investors, and quality of advice provided. After sales service and ongoing follow up, have been identified by customers, as the key differentiators, in assessing the capabilities of distributors. Drivers for purchase of mutual funds include tax benefits of mutual fund investments, consistency in fund performance and brand equity. Simplification of processes such as application and redemption process could potentially increase the quantum of investment in mutual funds. The study also revealed that Banks and IFAs are the preferred channel for investing in mutual funds.

During the CII Mutual Fund Summit 2010, PricewaterhouseCoopers and the Confederation of Indian Industry released a report titled "Indian Mutual Fund Industry Towards 2015: Sustaining Inclusive Growth - Evolving Business Models". The report traces the growth of the Indian mutual fund industry, showcasing India as an attractive investment destination. The report discusses the current state of the Indian mutual fund sector, highlighting the low level of retail participation and then moves
on to draw attention to the persistent challenges which the industry is facing.

Limited reach in smaller towns and cities (beyond Tier 1 cities), cost pressures and lack of investor education, are some of the most dominating concerns, which fund houses are dealing with. The report emphasises the predicament of the distribution community, after the restrictions on entry load, and tries to identify viable measures to deal with this change. The report devotes a section on the regulatory front, enlisting the various changes that have occurred over the last year, along with their impact on the business. The regulatory trends across some other global economies like US, UK, Australia and China also have been looked at to bring a perspective to local regulations vis a vis the rest of the world.

**Studies relating to Demographics and Individual Investor Investment Behaviour**

The purpose of this section of the review is to have an understanding of individual investor investment behaviour and demographics. Do age, gender, education, income and other demographics explain differences in individual investor investment behaviour?

Research indicates that the decision making pattern of males and females are significantly different when it comes to financial decisions. Dwyer *et al.* (2002) used data from nearly 2000 mutual fund investors and found that women take less risk than men in their mutual fund investments. According to Prince, (1993), Lunderberg *et al.*, (1994), men tend to be more confident, trade more frequently, rely less on brokers, believe that returns are more predictable and anticipate higher returns than women. Hinz et al (1997) conducted a study in US by using data from the Federal
Government's Thrift Saving Plan, their findings showed women are less likely to hold risky assets and more likely to allocate assets towards fixed income alternatives. This can also be supported by a research done by Prince (1993) Lunderberg *et al* (1994). According to this research men being more confident about their investment abilities than women are more likely to rely less on advice.(cited in, Ahmad Kaleem Rana, Abdul Wajid Hassan, Sagheer Hussain, 2009)\(^\text{147}\)

**Riley et.al.(1992)\(^\text{148}\),** developed a model to examine the hypothesized relationships between risk tolerance and other demographic variables. He found that relative risk aversion decreases as one rises above poverty level and decreases significantly for the very wealthy. It also decreases with age—but only up to a point. After age 65, risk aversion increases with age.

**Graham et al. (2002)\(^\text{149}\)** indicated that female investors appear both to be more risk averse and to have less confidence in their investment decisions than male investors in equivalent circumstances. On a larger scale, since women are more comprehensive information processors, and thus, trade less often than their male counterparts, it might be hypothesized that the increasing participation of women in investing will have a moderating effect on the stock market.

**Luigi Guiso and Tullio Jappelli (2005)\(^\text{150}\)** finds that the probability that survey respondents are aware of stocks, mutual funds and investment accounts is positively correlated with education, household resources, long-term bank relations and proxies for social interaction.

**Jasim Y. Al-Aj (2008)\(^\text{151}\)** Using a questionnaire method, this study presents evidence on the determinants of risk tolerance of individual investors in Bahrain. On the basis of an analysis of close to 1,500 respondents, the findings indicate that as
investors, men have high propensity towards risk tolerance than women. Investors with better level of education and wealth are more likely to seek risk than less educated and less wealthy ones. The study also reports that the investors' risk tolerance declines when they have more financial commitments as well as when they are approaching towards their retirement age or are retired. That is, the effect of investor's age on risk tolerance is complex, in contrast to results reported elsewhere. One of the most important implications of the results is that the investment industry should not treat investors as one homogeneous group; therefore, men and women as investors should be treated as separate market niches, each with its own needs and requiring targeted marketing strategies.

Saptarshi Purkayastha(2008) attempts to characterize and profile the individual investor in order to determine whether the variables age, occupation, designation, income and dependents -impact the risk appetite of an investor. The paper draws on data collected from the clients of an international bank operating in India. The data are analyzed in two stages. In the first stage, it analyzes whether demographics impact the risk appetite of an investor or not. In the second stage, it analyzes as to where people having specific demographics and risk appetites invest their money in reality.

Some of the key findings are that age, salary and designation do impact the risk appetite of an investor. However, in reality, investors tend to invest in average risk mutual funds, irrespective of their demographics and risk tolerance. The findings provide some opportunities for purveyors of financial services to be selective in their approach to various groups of individual investors.

Alex Wang(2009) using survey data focusing on investing in mutual funds as tested knowledge domain and measured behaviour, this study demonstrates that, at
least for investors, their objective knowledge, subjective knowledge, and risk taking are highly correlated. Gender emerges as an important factor that differentiates investors' levels of objective knowledge, subjective knowledge, and risk taking. Moreover, it is investors' subjective knowledge that mediates their objective knowledge on risk taking behaviour. Since male investors have higher subjective knowledge and objective knowledge than female investors, they often take more risks because of the mediation effect of subjective knowledge.

**Ming-Ming Lai and Wei-Khong Tan (2009)**[^154], through a questionnaire survey of 400 Malaysians, studied the attitudes of the Malaysians toward personal financial planning, which encompass money management, insurance planning, investment planning, retirement planning, and estate planning. Results revealed that the job status of an individual serves as the primary factor in influencing the attitudes and management of personal financial planning. Self-employed and employed respondents showed statistically significant higher mean values as compared to unemployed respondents. Employed and self-employed respondents appear to be more positive and active in money management, insurance, and investment planning. Demographic characteristics such as age, race, marital status, gender, and education level are the secondary factors.

**Petra Halling (2009)**[^155], examined whether better educated investors make smarter investment decisions and exhibit greater investment skill than less educated ones and found that older investors and traders with a university degree achieve a better stock investment performance than less educated and younger individuals.

**Yosef Bonaparte and Frank J. Fabozzi (2009)**[^156] presents a model of investor search behaviour in order to provide a framework by which they can evaluate their empirical evidence on the role of search, in portfolio selection and performance.
They study two types of search methods: informal and professional. They show that the income, wealth, and risk preference of households influence their search choice.

Joan C. Junkus and Thomas C. Berry (2010) surveyed a large group of US-based, well-informed, individual investors, members of the American Association of Individual Investors. The survey respondents included both those who invest according to Socially Responsible Investing (SRI) principles, and those with no interest in SRI, to determine if demographic differences exist. The paper finds that the typical SR investor is female and more likely to be single, younger, less wealthy, and better educated than their non-SR counterparts.

Conclusion

The review of literature has given a broad idea of the various studies made in the past years. This has thrown light both on the strengths as well as the deficiencies of the past research. The present study focuses on the growth of the Indian mutual fund industry and the performance of select equity oriented mutual fund schemes. More importantly it analyses the investment behaviour of mutual fund individual investor. The understanding of individual investor behaviour holds practical importance for developing appropriate marketing strategies within the mutual fund industry.

Endnote

1. Sadhak H., Mutual Fund-Investment and Marketing Practices in India, New

3. Sadhak H., op.cit, pp. 68-117


5. Femando, Deepthi, Klapper, et al., op.cit, pp. 9-10


11. Treynor Jack L, "How to Rate Management of Investment Funds", Harvard


34. Adhikari, Umesh and Bhosale, Meenal, "Risk-Return Analysis of Mutual Fund


45. Yadav, R. A. and Mishra, Biswadeep, "Performance Evaluation of Mutual


of Applied Finance, July 2004, pp.36-54.


80. JIN Xue-jun, YANG Xiao-lan., "Empirical study on mutual fund objective


100. "Mutual Funds gaining in popularity for Indian investors": Nielsen IndiaNews-Press Releases-14, August, 2007, <Nielsen.com/newsI20080728.htm1>


103. Radha V., "A Study of Investment Behavior of Investors of Corporate Securities",


117. Halling, Petra "Do better educated investors make smarter investment decisions?",http://www.fma.orglReno/Papers/education_and_investment decision.pdf, p. 39


119. Joan C. Junkus, Joan C, Berry Thomas C, "The Demographic Profile of Socially Responsible Investors", Managerial Finance 36 (6), 2010, pp. 474481