CHAPTER - 2
REVIEW OF LITERATURE
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2.1. INTRODUCTION

2.1.1. The mutual funds industry has been the fastest growing type of financial industry during the recent decades. The growth of the mutual fund industry started in the U.S., where the mutual fund industry plays an extremely important role in the economy. The trend has spread more recently to a significant number of countries around the world.

2.1.2. The Indian population is largely under invested with a very low level of financial inclusion. Large amount of savings of the Indian investor is channelised into gold and real estate rather than the capital market. Given the current scenario of market volatility and uncertainty, these are challenging times for the mutual fund industry, where the investor perceives investments in the capital market to be risky and unsafe. The mutual fund industry faces the daunting task of channelising these savings into mutual fund products.

2.1.3. Mutual Funds have large number of funds in existence and therefore evaluating and selecting funds can be particularly difficult and challenging. Investors are increasingly concerned about fund selection, demanding detailed mutual fund information and investment advice. The need for collecting data on mutual funds, comparing and rating fund performances and supplying investors with information for their investment decisions is gaining importance.

Hence a significant number of research studies have been undertaken by several researchers and scholars to study the various aspects of mutual fund performance.
2.2. REVIEW OF AVAILABLE LITERATURE

2.2.1. An attempt has been made in this chapter to review the available literature on the Performance of Mutual Funds. The study has revealed several important aspects relating to the performance of mutual funds such as:

(a) Performance and portfolio characteristics of mutual funds.

(b) Factors that matter to financial advisors.

(c) Investor's attitudes towards mutual funds.

(d) Introduction of extra variables to the existing mutual fund performance models.

(e) Determinants of mutual fund mergers and their subsequent wealth impact on shareholders.

(f) Performance of Individually managed funds and funds managed by teams.

(g) Impact of daily mutual fund volatility on fund performance.

(h) Investor's interpretation of past Fund returns.

(i) Study of selected attributes on long term performance.

(j) Timing ability of fund managers.

(k) Mutual fund manager's personal fund investment and mutual fund performance.

(l) Performance of institutional mutual funds using kernel density estimation.

(m) Mutual fund flows and the portfolio liquidity of mutual funds.

(n) Performance persistency of open and close ended mutual funds.

(o) Selection of right benchmark by mutual fund managers.

(p) Which investment management style active or passive produced better risk adjusted performance.

(q) Relationship between performance and risk exposure for mutual funds.
2.2.2. Bala Ramasamy and Matthew C.H. Yeung (2003) in their paper titled “Evaluating mutual funds in an emerging market: factors that matter to financial advisors” have tried to identify the attributes which financial advisors consider relatively important in a mutual fund. Through a survey of previous literature they identified factors that contribute to the performance of a mutual fund. The study employed conjoint analysis to design the questionnaire and evaluates the perception of the financial advisors in Malaysia. No one factor has received as much attention in previous literature as past performance because it is seen to be the simplest and most direct method to gauge the performance of a mutual fund. To what extent the role of past performance influences the choice of funds, relative to other determining factors, is taken up in their survey. Still, there seem to be some doubts as to whether previous performance is a good indicator of future performance. They found past performance, the size of funds and cost of transaction to be the three most important factors in a mutual fund. Financial advisors are looking for consistent growth of funds over the long term. They also prefer managers who are aggressive, experienced and professionally qualified. As for funds, there is greater affinity for funds which are large and linked to a government agency. The fund management company should also provide a variety of funds at lower transaction costs.

2.2.3. Mary Jane Lenard, Syed H. Akhter, Pervaiz Alam (2003) in their paper titled “Mapping Mutual Fund Investor Characteristics and Modeling Switching Behavior” have empirically investigated investor attitudes toward mutual funds. Their model, based on investor responses, develops an investor's "risk profile" variable. Results indicate that regardless of whether the investors invest in nonemployer plans or in both employer and nonemployer plans, they consider their investment risk, fund performance, investment mix, and the capital base of the fund before switching funds. The model developed in this study can also assist in predicting investors’ switching behavior.

2.2.4. In the paper titled “How to measure mutual fund performance: economic versus statistical relevance” Roger Otten, Dennis Bams (2004) have explored the added value of introducing extra variables such as size, book to market, momentum and a bond index to the existing mutual fund performance models. Their search for most suitable model to
measure mutual fund performance has resulted in the conclusion that conditional models
add strong economic relevance because of the ability to detect patterns in fund betas. This
enables the investor to monitor the dynamic behavior of mutual fund managers.

2.2.5. Javier Gil-Bazo and Pablo Ruiz-Verdu (2009) in their paper titled “The Relation
between Price and Performance in the Mutual Fund Industry” have highlighted Gruber
(1996) theory that investors buy actively managed equity mutual funds, even though on
average such funds underperform index funds. Their study reveals another puzzling fact
about the market for equity mutual funds: Funds with worse before free performance
charge higher fees. This negative relation between fees and performance is robust and can
be explained as the outcome of strategic fee setting by mutual funds in the presence of
investors with different degrees of sensitivity to performance. They found that better fund
governance may bring fees more in line with performance.

Fund Performance” have studied standard mutual fund performance measures using the
simulated funds whose characteristics mimic actual funds. It was found that performance
measures used in previous mutual fund research have little ability to detect economically
large magnitudes of abnormal fund performance, particularly if a fund’s style
characteristics differ from those of the value weighted market portfolio. Power can be
substantially improved, however, using event-study procedures that analyze a fund’s
stock trades. These procedures are feasible using time series data on mutual fund
portfolio holdings.

2.2.7. In their paper titled “On the Timing Ability of Mutual Fund Managers” Nicolas
Bollen, Jeffrey Busse (2001) argue that the existing studies of mutual fund market
timing analyze monthly returns and find little evidence of timing ability. It is shown that
daily tests are more powerful and that mutual funds exhibit significant timing ability
more often in daily tests than in monthly tests. A set of synthetic fund returns is
constructed in order to control for poor results. The daily timing co-efficients of the
majority of funds are significantly different from their synthetic counterparts. These
results suggest that mutual funds may possess more timing ability than previously documented.

2.2.8. Narayanan Jayaraman\textsuperscript{7}, Ajay Khorana, Edward Nelling (2002) in their paper titled “An Analysis of the Determinants and Shareholder Wealth Effects of Mutual Fund Mergers” examined the determinants of mutual fund mergers and their subsequent wealth impact on shareholders of target and acquiring funds. Results indicate significant improvements in post merger performance and a reduction in expense ratios for target fund shareholders. In contrast, acquiring fund shareholders experience a significant deterioration in post merger performance. The net asset flows continue to remain negative for the combined fund in the year following the merger. The likelihood of a fund merger is inversely related to fund size for both within and across family mutual fund mergers. However, poor past performance is a significant determinant for only within family mergers.

2.2.9. The studies made by Stephanos Papadamou\textsuperscript{8} & Costas Siriopoulos, (2004) in their paper titled “American equity mutual funds in European markets: Hot hands phenomenon and style analysis” empirically prove that the American no-load equity mutual funds that invest in European stocks and keep their managers for more than three years, in order to investigate the persistence of short term performance and the related investment style. The results showed an underperformance compared to the Eurostoxx index and a hot hands phenomenon does not persist, with some exceptions. Mutual funds that performed well in a five month evaluation period continued to generate superior performance in the next four months. According to style analysis a portfolio constructed by growth-large, growth-medium and value large capitalization stocks outperformed any other investment style. However, well diversified funds were the most mean-variance efficient, style consistent funds.

2.2.10. In their paper titled “Private Equity Performance: Returns, Persistence, and Capital Flows”, Steven Kaplan\textsuperscript{9} and Antoinette Schoar (2005) investigated the performance and capital inflows of private equity partnerships. Average fund returns (net
of fees) approximately equal the S&P 500 although substantial heterogeneity across funds exists. Returns persist strongly across subsequent funds of a partnership. Better performing partnerships are more likely to raise follow-on funds and larger funds. This relationship is concave, so top performing partnerships grow proportionally less than average performers. At the industry level, market entry and fund performance are procyclical; however, established funds are less sensitive to cycles than new entrants. Several of these results differ markedly from those for mutual funds.

2.2.11. The other stream of study by Jennifer Huang & Kelsey D. Wei & Hong Yan, (2007) in their paper titled “Participation Costs and the Sensitivity of Fund Flows to Past Performance” portrays that mutual funds with lower participation costs have higher flow sensitivity to medium performance and lower flow sensitivity to high performance than their higher cost peers. Using various fund characteristics as proxies for reduction in participation costs, they provide empirical evidence supporting the model’s implications for the asymmetric flow performance relationship.

2.2.12. Joshua Pollet, Mungo Wilson (2008) in their paper titled “How Does Size Affect Mutual Fund Behavior?” address the issues related to size of fund that affects the mutual fund behaviour. They found that if actively managed mutual funds suffer from diminishing returns to scale, funds should alter investment behavior as assets under management increase. Although asset growth has little effect on the behavior of the typical fund, they find that large funds and small-cap funds diversify their portfolios in response to growth. Greater diversification, especially for small-cap funds, is associated with better performance. Moreover, Fund family growth is related to the introduction of new funds that hold different stocks from their existing siblings. Funds with many siblings diversify less rapidly as they grow, suggesting that the fund family may influence a fund's portfolio strategy.

2.2.13. Paulo Armada Leite and Maria Ceu Cortez. (2009) in their paper titled “Conditioning information in mutual fund performance evaluation: Portuguese evidence” estimated and compared the performance of Portuguese-based mutual funds that invest in
the domestic market and in the European market using unconditional and conditional models of performance evaluation. The results suggest that mutual fund managers are not able to outperform the market, presenting negative or neutral performance. The incorporation of conditioning information in performance evaluation models is supported by their findings, as it improves the explanatory power of the models and there is evidence of both time-varying betas and alphas related to the public information variables. It is also shown that the number of lags to be used in the stochastic detrending procedure is a critical choice, as it will impact the significance of the conditioning information. In addition, we observe a distance effect, since managers who invest locally seem to outperform those who invest in the European market. However, after controlling for public information, this effect is slightly reduced. Furthermore, the results suggest that survivorship bias has a small impact on performance estimates.

2.2.14. The studies made by Aymen Karoui\textsuperscript{13} and Iwan Meier (2009) in their paper titled "Performance and characteristics of mutual fund" emphasises on the performance and portfolio characteristics of 828 newly launched US equity mutual funds over the period 1991-2005. These fund start ups initially earn on average, higher excess returns and higher abnormal returns. Their risk-adjusted performance is also superior to existing funds. Furthermore, they provide evidence for short-term persistence among top-performing fund starts, however, a substantial fraction of funds drop from the top to the bottom decile over two subsequent periods. Analyzing portfolio characteristics, further they found that returns of fund start exhibiting higher ratios of unsystematic to total risk. Portfolios of new funds are typically also less diversified in terms of number of stocks and industry concentration and are invested in smaller and less liquid stocks.

2.2.15. An investigation on the conditional performance of a sample of German equity mutual funds over the period from 1994 to 2003 conducted by Wolfgang Bessler\textsuperscript{14}, Wolfgang Drobetzb and Heinz Zimmermannc, (2009) in their paper titled "Conditional performance evaluation for German equity mutual funds" found that conditional performance evaluation raises the benchmark for active fund managers because it gives them no credit for exploiting readily available information. Moreover, underperformance
is more pronounced in the SDF framework than in beta-pricing models. The fund performance measures derived from alternative model specifications differ depending on the number of primitive assets taken to calibrate the SDF as well as the number of instrument variables used to scale assets and/or factors.

2.2.16. In their paper titled "Performance Characteristics of Individual vs. Team Managed Mutual Funds", Richard Bliss and Mark Potter (2008) provide an empirical examination of whether funds managed by individuals perform differently from funds managed by teams. Using a sample of about 3,000 equity mutual funds over a 12-year horizon, the authors find that although the number of funds managed by teams has grown at seven times the rate of funds managed by individuals, no significant difference in risk-adjusted performance is observed between team-managed and individually managed funds. Funds managed by teams, however, are significantly less risky and exhibit lower turnover. In addition, the total cost of owning a team-managed mutual fund is, on average, nearly 50 bps lower per year than the cost of owning an individually managed mutual fund. Finally, team-managed funds attract significantly greater investor flows than individually managed funds, even after controlling for performance, risk, and expenses.

2.2.17. David Rakowski (2010) in his paper "Fund Flow Volatility and Performance" has done a detailed analysis of the impact of daily mutual fund flow volatility on fund performance. According to him there is a negative relationship between volatility of daily fund flows and cross sectional differences in risk adjusted performance. This relationship is driven by domestic equity funds as well as small funds, well performing funds and funds that experience inflows over the sample period. The results are consistent with performance differences arising from the transaction costs of non discretionary trading driven by daily fund flows but not with performance differences arising from the suboptimal cash holdings that arise from fund flows.

2.2.18. Elton, Gruber and Blake (2011) have shown that selecting mutual funds using alpha computed from a fund’s holdings and security betas produces better future alphas than selecting funds using alpha computed from a time-series regression on fund returns.
This is true whether future alphas are computed using holdings and security betas or a
time-series regression on fund returns. Furthermore, they show that the more frequently
the holdings data are available, the greater the benefit. This has major implications for the
Securities and Exchange Commission’s recent ruling on the frequency of holdings
disclosure and the information plan sponsors should collect from portfolio managers.
They have also explored the effect of conditioning betas on macroeconomic variables as
suggested by Ferson and Schadt (1996) to identify superior-performing mutual funds as
well as the alternative way of employing holdings data proposed by Grinblatt and Titman
(1993).

2.2.19. Jose Gaspar, Massimo Massa and Pedro Matos (2006) in their paper
"Favoritism in Mutual Fund Families? Evidence on Strategic Cross-Fund Subsidization"
have investigated whether mutual fund families strategically transfer performance across
member funds to favor those more likely to increase overall family profits. They find that
"high family value" funds (i.e., high fees or high past performers) overperform at the
expense of "low value" funds. Such a performance gap is above the one existing between
similar funds not affiliated with the same family. Better allocations of underpriced initial
public offering deals and opposite trades across member funds partly explain why high
value funds overperform. Their findings highlight how the family organization prevalent
in the mutual fund industry generates distortions in delegated asset management.

2.2.20. Fama and French (2010) in their paper titled “Luck versus Skill in the Cross-
Section of Mutual Fund Returns” have shown that the total portfolio of actively managed
U.S equity mutual funds is similar to the market portfolio, but the high costs of managing
the funds is reflected in lower returns to investors. Bootstrap simulations show that few
funds give benchmark adjusted expected returns sufficient to cover their costs. If the
costs are added back in fund expense ratios then inferior and superior performance in the
extreme tails of the cross-section of mutual fund estimates is reflected.

2.2.21. In this research paper titled "False Discoveries in Mutual Fund Performance:
Measuring Luck in estimated Alphas", the authors Barras, Scalliet and Wermers (2010)
have developed a simple technique that controls for "false discoveries" or mutual funds that show significant alphas by luck alone. Their approach separates funds into (1) unskilled, (2) zero alpha and (3) skilled funds. Findings are that 75% of funds show zero alpha, consistent with the Berk and Green equilibrium. Further they found that a significant proportion of skilled (positive alpha) funds prior to 1996, but almost none by 2006. This shows that controlling for false discoveries helps in finding few funds with persistent performance.

2.2.22. Lynch and Musto (2003) in their paper titled "How Investors Interpret past Fund returns" have found a convex relation between past returns and fund flows of mutual funds. According to them past returns tell less about the future performance of funds. Their model predicts that bad performance leads to strategy change by fund managers. Their prediction is supported by empirical tests.

2.2.23. In a recent study, Idzorek, Xiong, and Ibbotson (2010) documented in their paper titled "Combining Liquidity and Momentum to pick top performing mutual Funds" the liquidity investment style in mutual funds by combining data from an individual stock database with a mutual fund holding database to build composites of mutual funds based on liquidity. The study found that composites of mutual funds that hold relatively less liquid stocks dramatically outperformed composites of mutual funds that hold more liquid stocks. Using the same techniques, in this paper they tried to investigate if composites of mutual funds that hold stocks with high momentum outperform composites of mutual funds that hold stocks with low momentum. Next, they build composites of mutual funds based on a combination of liquidity and momentum factors. The researchers found that composites of mutual funds that hold low liquidity high momentum stocks dramatically outperform those that hold high liquidity low momentum stocks.

2.2.24. Michael Millstone (2008) in his dissertation for Ph.D titled "Mutual Funds: A study of selected attributes on long term performance", has examined three specific mutual fund attributes and their affect on predicting overall mutual fund performance. This study added to the existing literature by introducing new evidence on the causal
effects of selected mutual fund attributes on total mutual fund performance by using: (a) different time periods, (b) different attributes, and (c) more recent data. The results of this study address some contradictory conclusions from previous studies and add new data regarding seldom used mutual fund attributes in determining total mutual fund performance. This study found that two of the three mutual fund attributes examined (Sharpe Ratio and management tenure) did affect total mutual fund performance and were statistically significant for a majority of the years examined. The findings are consistent with past researchers who found that selected mutual fund attributes do affect mutual fund performance; however, the degree of prediction power is relatively small. Results show that although all three attributes show evidence of affecting mutual fund performance, the combined effects of all the independent variables is greater. This may be interpreted that these three attributes, used together with other attributes may be worthwhile factors in explaining mutual fund performance. The data suggests there is some element of causation, but the effect on variability is small enough to suggest that these attributes alone are not enough to be used as the sole basis for individual investor mutual fund selection without considering the variety of other factors available.

2.2.25. In the paper titled “Performance Evaluation of Balanced Mutual Fund Schemes in Indian Scenario”, Himanshu Puri has made an attempt to study the performance of selected balanced schemes of mutual funds based on risk-return relationship models and various measures. Balanced schemes of mutual funds are the ones which are mostly preferred by Indian investors because of their balanced portfolio in equity and debt. A total of 30 schemes offered by various mutual funds have been studied over the time period September 2007 to August 2010 (3 years). The analysis has been made on the basis of mean return, beta risk, total risk, Sharpe ratio, Treynor ratio and Jensen Alpha. The overall analysis finds HDFC (Growth) Mutual fund being the best performer and JM Financial (Dividend) Mutual fund showing poor below-average performance when measured against the risk-return relationship models.

2.2.26. Employing a novel data set of portfolio weights from 1997 to 2006, the performance of taxable bond mutual funds is studied by Fabio Moneta (2009). In his
dissertation for Ph.D titled “Measuring Bond Mutual Fund Performance with Portfolio Characteristics”, the timing ability of fund managers is examined considering different asset allocation choices such as asset class, credit quality allocation and portfolio maturity decisions. The researcher has found that active managers engage in strategies of rotating their portfolios across fixed-income sectors and bond characteristics. Some bond funds exhibit successful timing ability by adopting these strategies. Comparing fund returns plus expenses and transaction costs with the returns of a portfolio that is invested in the previously disclosed holdings, it is found that active managers exhibit some ability to select securities that deliver better returns than the securities in the indices. In particular, on average, active managers generate gross returns of 1% per annum over the benchmark portfolio constructed using past holdings.

2.2.27. According to Jean Guimond (2005) in his PhD dissertation titled “Do Mutual Fund Managers have superior Skills” have found that actively managed portfolios must differ from passively managed ones. Consequently, the manager’s problem can be viewed as selecting how to deviate from a passive portfolio composition. The author in his study has tried to find out whether fund managers possess superior skills through the analysis of the portfolio deviations from a benchmark. Based on the Black-Litterman approach, the author has hypothesised that positive signals should lead to an increase in weight, from which should follow that the largest deviations from a benchmark weight reveal the presence of superior skills. A sample of 8385 US funds from the CRSP Survivorship bias free database from June 2003 to June 2004 is used to test the predictions. Jean has used two external benchmarks to calculate the deviations: the CRSP value weighted index (consistent with the Black-Litterman model) and the investment objective of each fund. Findings are that a portfolio of the securities with the most important positive deviations with respect to a passive benchmark (either CRSP-VW or investment objective), would have earned a subsequent positive abnormal return (on a risk-adjusted basis) for one month after the portfolio date. The magnitude of this return is around 0.6% for all the funds, and can be as high as 2.77% for small caps value funds. This result is robust to all the performance measures used in the study.
2.2.28. This paper "Analyzing Mutual Fund Performance Against Established Performance Benchmarks: A Test of Market Efficiency" by Theodore Prince and Frank Bacon (2006) analyzes the small cap growth stock sector of the mutual fund industry against risk-free and market returns over the ten years 1997-2006. Results are tested against a toolkit of performance benchmarks to see if expected performance closely corresponds to the actual results. Development of various performance benchmarks has allowed investors to quantitatively assess various portfolio alternatives and has established that diversification can reduce systematic risk. Mutual funds are a way for most investors to achieve these results without the need for expensive research and excessive trading costs. The results indicate that some excess returns have been generated; however, beyond a handful of the funds, it is impossible to rely upon a single benchmark as a reliable indicator of even past performance. A “portfolio approach” of combining the benchmarks does not seem to work any better. The evidence tends to support market efficiency since for the most part, the actively managed funds examined in this study produced returns that were largely expected.

2.2.29. Chen, Chang and Wu (2008), in their paper titled "A Framework of Assessable Mutual Fund Performance, Journal of Modeling in Management" have tried to find how investors evaluate mutual fund performance, not only based on both quantitative but also qualitative criteria. This paper adopts the modified Delphi method and the analytical hierarchy process (AHP) method for evaluating mutual fund performance. The most important criteria of mutual fund performance should be “mutual fund style” followed by “market investment environment.” The AHP assumes the criteria are independent between each other. However, in many real cases, the criteria to evaluate the funds’ performance are not independent. Therefore, the authors suggest that correlation between each criterion should be considered in the future research. When making investment decisions, investors should concentrate more on gathering information of mutual fund style. As for mutual fund issuers, they could also leverage these results to communicate with their clients in more efficient way. This study presented a framework
of assessable mutual fund performance where the AHP was employed for finding both tangible and intangible criteria of performance evaluation.

2.2.30. Allison Evans in his paper titled "Portfolio Manager Ownership and Mutual Fund Performance" has examined the association between a mutual fund manager's personal fund investment and mutual fund performance. Mutual Fund ownership varies across mutual fund managers. The author has found that mutual fund returns are increasing in the level of managerial fund investment, consistent with managerial ownership realigning decision-maker and shareholder interests. Also consistent with the reduction of agency costs, managerial ownership is inversely related to fund turnover, which could affect both tax and trading costs. However, the author could not find any association between portfolio manager ownership and a mutual fund's tax burden.

2.2.31. In his dissertation for Ph.D titled "Evaluating performance of institutional mutual funds using kernel density estimation" the author Sencicek, Mehmet (2005), has tried to evaluate the performance of institutional mutual funds using kernel density estimation. Although there is substantial amount of work done using conditional and unconditional methods, non parametric methods in general and kernel density estimation in particular have not been used widely. Further no study has been done earlier on institutional mutual funds even though they are different from other mutual funds in several respects that could affect their respective performance.

2.2.32. Grace Koo (2007) in his dissertation for Ph.D titled "Mutual Fund Flows and Liquidity" has made a comprehensive study on mutual fund flows and the portfolio liquidity of mutual funds. The Researcher has considered the problem of aligning the incentives between the mutual fund investor and the mutual fund manager. Her findings show that the investor reduces the overall risk of the portfolio by threatening to lower the allocation of future wealth to the mutual fund manager. The model predicts that the flow-performance relationship is sensitive to the riskiness of the funds, the riskiness of the underlying asset and the fee structure of the fund. The author has performed an empirical
analysis on mutual fund flows. The objective of the study is to improve the understanding of the sensitivity of future mutual fund flows to past fund performance, in particular, how individual fund characteristics influence the mutual fund flow-performance relationship. Grace tested the empirical predictions of the model and found supporting evidence that the flow-performance relationship is sensitive to the load fees of the mutual fund.

2.2.33. Earlier research shows mixed results concerning whether certain mutual fund attributes affect mutual fund performance. Ninh Nguyen (2004) in his dissertation for Ph.D titled “Do Mutual fund Attributes affect mutual fund performance” examines various mutual fund attributes such as management tenure, internal costs, and turnover ratios, which are at the center of debate in the mutual fund literature. This research adds to the literature by presenting new evidence on the attribute/performance relationship using recent data and a larger sample. The new findings presented in this study address the contradictory conclusions in the previous research papers. Three of the four mutual fund attributes affect mutual fund performance, while the one variable found not to have been statistically significant would have been significant had the level of confidence been lowered from 95% to 90%. The author has included certain practical guidelines for investors in selecting mutual funds, overall model fit and scope for future research work.

2.2.34. The author Dale Prondzinski (2010), in his paper titled “Passive versus Active Management of Mutual Funds: Evidence from the 1995-2008 Period” has explored the research question: During the full 1995 to 2008 market cycle, which investment management style, active or passive, produced the better risk-adjusted performance? The study comprised of 45 statistical tests, found that on a risk-adjusted basis that the active indices (proxies for active management) Sharpe ratios were significantly greater than those of the passive indices (proxies for passive management) Sharpe ratios for; 1) the midcap blend category for the periods 1995 to 2008 and 1995 to 1999; 2) the small blend category for the periods 1995 to 2008 and 1995 to 1999, and 3) the small value category for the periods 1995 to 2008, 1995 to 1999, and 2000 to 2002. Therefore, the active
indices Sharpe ratio significantly exceeded the passive indices Sharpe ratio for 16% of the statistical tests conducted. While the active indices Sharpe ratio did not significantly exceed the passive indices Sharpe ratio for 84% of the statistical tests conducted. The findings suggested that in the long run passive management produced better performance results than active management.

2.2.35. In his dissertation for Ph.D titled “Mutual fund performance persistency: A study using both open and closed-end funds”, the author Douglas E. Smith (2001), has studied the performance persistency of open and close ended mutual funds. In addition to a direct study of performance persistency, Smith has identified fund characteristics of expenses, net assets and turnover to measure what if any, their impact may be upon funds that do and do not display performance persistency. The findings are that performance persistency may be detected though the results are mixed. Risk adjusted returns are mean consistent for some classes, yet display wide swings from the arithmetic mean in others. Superior performance persistency of closed end funds over open end funds is not detected and the effects of fund characteristics on funds displaying performance persistency are mixed.

2.2.36. In their paper titled “Are mutual fund managers selecting the right benchmark index”, the authors Costa and Jacob (2011), have determined index suitability for mutual funds that specify the S & P 500 as their performance benchmark. Using a four factor model, they have calculated factor loadings for mutual funds and their benchmark index and measure deviations with respect to the risk factors in the model. Their results indicate that fine tuning of abnormal performance measurement can significantly alter inferences regarding fund manager’s contribution to mutual fund performance. Using this methodology, investors and academics can more accurately assess mutual fund manager performance relative to an appropriate benchmark, regardless of the target index selected by the management of the mutual fund.
2.2.37. Jingchang\textsuperscript{36} Lu (2009) in his dissertation for Ph.D titled "Empirical evidences on risk-taking and performance of mutual fund" has examined the relationship between performance and risk exposure for mutual funds. The preliminary analysis failed to support the tournament hypothesis, which predicts that poorly performing managers will increase risk exposure while outperforming managers will decrease risk exposure. Instead, he has found evidence of risk reduction for extreme losers and risk increase for winning managers. Overall, the competition among fund managers appears to affect choice of risk taken by fund managers and in turn has an effect on future performance. However, alteration of portfolio risk mainly varies as per fund style and prior performance.

2.2.38. Zhaojin\textsuperscript{37} Xu (2007) in his dissertation for Ph.D titled "Selling Winners, Holding Losers: Effect on Mutual Fund Performance and Flows" has examined whether the disposition effect, the tendency to sell winners and hold losers, exists among U.S. equity mutual funds and how the disposition effect influences fund performance and particularly flows. He has found that a significant fraction (32%) of all funds exhibit some degree of disposition behavior. These funds underperform funds that are not disposition prone by 4-6% per year. Moreover, the disposition effect has a significant impact on future fund flows. Without controlling for performance, disposition-prone funds experience 2-3% less flows each quarter than other funds. The difference in flows is probably due to poor performance of such funds. However, even after controlling for performance and other factors that potentially influence flows, funds with a high disposition effect experience 0.7-2% less flows than funds without such behavior.

2.2.39. Andrea\textsuperscript{38} (2011), in his dissertation for Ph.D titled "The Effect of the Business Cycle on the Performance of Socially Responsible Equity Mutual Funds", applied a two-state switching regression model to examine the behavior of a hypothetical portfolio of ten socially responsible (SRI) equity mutual funds during the expansion and contraction phases of US business cycles between April 1991 and June 2009, based on the Carhart four-factor model, using monthly data. The model identified a business cycle effect on...
the performance of SRI equity mutual funds. Fund returns were less volatile during expansion/peaks than during contraction/troughs, as indicated by the standard deviation of returns.

2.2.40. In his Ph.D thesis titled "Three Perspectives of Mutual Fund Performance: The Individual investor, the Finance Professional and the Board of Directors", Steve Nenninger (2009), has compared the flow-performance sensitivity of no-load funds and the three main classes of load fund shares, assuming investment advisors are more likely to guide the decision-making process of load fund investors. The findings show that load investors are more sensitive to raw fund return than are no-load investors. The flow to performance relation increases during good market states, but portfolios formed from the top performing funds after good market years actually tend to underperform during the following three years. Steve has also examined performance of actively managed mutual funds separately for good and bad states of the market to test whether mutual funds perform differently under different market conditions. He has found that the sample of funds performs 2.3 percentage points better in good states over bad on a risk adjusted basis. He has also analyzed the performance of mutual funds by assuming individual funds as part of a larger, more complete portfolio. The performance of the portfolios closely matches that of the individual funds.

2.2.41. In this paper titled "Mutual fund Corporate Culture and Performance", Gottesman and Morey (2012) have tested whether mutual fund's own corporate culture predicts fund performance. They have used Morningstar's corporate culture ratings for mutual funds and then examined the ability of these corporate culture ratings to predict risk adjusted performance of domestic equity funds over the period 2005-2010. The authors found that no individual component of Morningstar stewardship rating including board quality, fees, manager incentive and regulatory issues would be able to consistently predict fund performance.
2.2.42. Shen, Lu and Lin (2012), have investigated the net effect between diversification benefit and information cost of real estate mutual funds from three dimensions: whether managers of international real estate mutual funds possess superior market knowledge and timing abilities, whether investors are motivated by returns or diversification and whether investors can benefit from investing in international real estate funds. Their findings show that international real estate mutual funds perform better and are less risky than domestic real estate mutual funds before June 2007. That is, diversification benefits outweigh the information costs and investors therefore gain from investing in international real estate mutual funds. The second finding is that neither international mutual fund managers nor domestic mutual fund managers possess market timing abilities. Finally, they have found that fund flows are driven by investors’ return chasing behavior and fund size, but not by diversification purpose.

2.2.43. David Nanigian (2012) in his paper titled “Advice on Mutual Fund Selection” has shown that many empirical studies on mutual fund performance have led investors to believe that a negative relationship exists between expenses and performance. This paper shows how there are econometric problems with the regressions that are commonly employed in these studies. These problems have negatively biased investors’ perceptions of actively managed funds, which motivates the need to consider factors other than expenses or adherence to a passive management strategy in one’s mutual fund selection framework. The literature on such factors that predict fund performance is also reviewed.

2.2.44. In his paper titled “The Performance of Corporate Bond Mutual Funds: Evidence Based on Security-Level Holdings”, Gjergji Cici and Scott Gibson (2012) have examined detailed security-level holdings and returns. The new database allowed them to decompose the costs and benefits of active management. In contrast to prior research on equity funds that shows evidence of stock-selection ability, they have not found evidence consistent with bond fund managers, on average, being able to select corporate bonds that outperform other bonds with similar characteristics. They found neutral to weakly
positive evidence of ability to time corporate bond characteristics. Overall results show that the costs of active management on average appear larger than the benefits.

2.2.45. Lubos Pastor and Robert F. Stambaugh in their paper titled “Evaluating and Investing in Equity Mutual Funds” have developed a framework for evaluating and investing in mutual funds and observed returns on funds and passive assets with prior beliefs that distinguish pricing-model inaccuracy from managerial skill. A fund’s "alpha" is defined using passive benchmarks. They show that returns on non-benchmark passive assets help estimate alpha more precisely for most funds. The resulting estimates generally vary less than standard estimates across alternative benchmark specifications. Optimal portfolios constructed from a large universe of equity funds can include actively managed funds even when managerial skill is precluded. The fund universe offers no close substitutes for the Fama-French and momentum benchmarks.

2.2.46. Joseph Chen, Harrison Hong, Ming Huang and Jeffrey Kubik in their paper titled “Does Fund Size Erode Mutual Fund Performance? The Role of Liquidity and Organization” have investigated the effect of scale on performance in the active money management industry. They first documented that fund returns, both before and after fees and expenses, decline with lagged fund size, even after accounting for various performance benchmarks. They then explored a number of potential explanations for this relationship. This association is most pronounced among funds that have to invest in small and illiquid stocks, suggesting that these adverse scale effects are related to liquidity. Controlling for its size, a fund’s return does not deteriorate with the size of the family that it belongs to, indicating that scale need not be bad for performance depending on how the fund is organized. Finally, using data on whether funds are solo-managed or team-managed and the composition of fund investments, they explored the idea that scale erodes fund performance because of the interaction of liquidity and organizational diseconomies.
2.2.47. In their paper titled "Mutual Fund Ratings and Performance Persistence", Pierre Hereil, Philippe Mitaine, Nicolas Moussavi, Thierry Roncalli have studied the persistence of mutual fund performance. Academic research often focuses on fund returns, sometimes adjusted for style and market cap biases. Because fund rating systems play a central role in the asset management industry, they considered another approach in this paper. Using a Markov modeling of these ratings, they illustrated that the persistence of the performance is relatively poor with respect to the time horizon of investors. They showed that two facts may explain these results. First, the rating system is not necessarily time-homogeneous. Second, the importance of style is crucial when comparing the ratings of mutual funds. However, they showed that it is extremely difficult to characterize quantitatively the style of a mutual fund. They concluded that fund selection is more art than science, and that quantitative analysis must be combined with qualitative insight.

2.3. Conclusion: From the above review, it can be seen that the various scholars have studied the various aspects of mutual funds like investor attitudes, mutual fund mergers, mutual fund attributes and timing ability of fund managers. However, no research has been done on performance of Monthly Income Plan (MIP) funds. Perception of investors regarding Monthly Income Plan funds is another area which has not been explored by the researchers. The impact of debt equity exposure of MIP funds on the returns generated is also an important area to be studied.

An attempt therefore has been made by the researcher to study these aspects in detail and help the investors take informed decisions. Thus, this chapter provides the foundation on the basis of which the objectives and hypothesis of the study are formed.
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