REVIEW OF LITERATURE

Mutual funds play a vital role in sinking risk and transaction cost while investing in the stock markets. They recommend a new competent course of investing. In the progression of encouraging supplementary investments they help in realizing factual values of securities. This in return acts a magnet for investments through the initial public offer way and unleashes the savings of Indian households. The review of literature is to guide us in the methodologies to be used, estimation procedures and interpretation of results. This chapter, therefore, focuses on both theoretical and empirical literature to understand the need for performance evaluation of mutual funds in specific context to Indian industry. Review of literature is that section of any research study which provides a critical view and a detailed overview of all the magnitudes of the specific subject of study, which has already been explored over different time gaps. This inspires for further research. Mutual funds being an “in” thing, it is of no doubt that a lot of researchers have done significant amount of work at national and international levels regarding their different aspects. Therefore to have a better understanding of the past and present conditions a review of related studies has been done. Some of these have been briefly presented below in a chronological order. Literature on mutual fund performance evaluation is enormous. A few research studies that have influenced the preparation of this paper substantially are discussed in this section.

This Chapter is sub divided into the following section:

2.1 Indian studies.

2.2 International studies.

2.1 INDIAN STUDIES

Jaydev (1996) evaluated the performance of two schemes during the period starting from June 1992 till March 1994 in terms of returns with benchmark comparison, diversification of investments, selectivity in portfolio and market timing skills of the fund managers. In this study it was concluded that the selected schemes failed to perform better than the market portfolio which was taken to be ordinary share price index. It was also noted that diversification was not good enough. The article also summed up that the performance did not show any signs of selectivity in portfolio designing and market timing skills being practiced.
Tripathy (1996) wrote an article on the origin, importance, growth trend, types of schemes, Short comings in operation, future outlook and suggestion regarding mutual funds in India. The Indian capital market had been rising enormously during the last few decades. After the introduction of the reforms, the economy was opened up for the world and many developments had been taking place in the Indian money market and capital market since then. With the purpose to help the small retail investors, mutual fund industry had come up to take an imperative place. The main objective of this paper was to examine the importance and growth of mutual funds and evaluate their operations and suggest some measures to make it, a more successful investment avenue in India. The article pointed out that, the investors in India prefer to invest in mutual funds as a replacement of fixed deposits in banks and about 75% of the investors were not willing to invest in mutual funds unless there was a promise of a minimum return. Therefore it became necessary to create in the mind of the investors that mutual funds are market instruments and associated with market fluctuations which is the reason why mutual funds cannot offer guaranteed income. The cross transactions between mutual funds and financial institutions were not only allowing speculators to manipulate price but also providing cash leading to the distortion of balanced growth of market. The growth of mutual funds tended to increase the shareholdings in good companies which gave rise to the fear of destabilization among industrial groups, hence introduction of voting shares and lowering the debt-equity ratio helped to remove these trepidations. The article also suggested that infrastructure bottlenecks should have been removed and banking and postal systems will have to take certain responsibilities for growth of mutual funds

Prava (2000) wrote a book broadly on financial instruments and services, in which a separate chapter was written to cover mutual funds. In this section types of mutual funds their advantages, how to choose a mutual fund for investment, calculation of NAV, mutual funds guidelines, SEBI regulations and growth trends from 1978 to 2000 was discussed. Growth was studied in terms of sales and redemption figures, gross mobilization of resources, changing fund preferences, net inflow and outflow. A comparison of mutual funds with banking services on the basis of parameters like liquidity, risk, network, return, safety etc was also carried out. The study found that entry of private sector had imparted competitive efficiency in the industry. It also highlighted that the preference of investors towards debt, equity, balanced and money market mutual funds was very unpredictable and kept on changing every year. Since 1990-91 mutual funds collection had grown 25% annually as against a bank deposit rate of 14%. There was no doubt that mutual funds schemes were
equally good as bank deposits. The AUM had seen a growth from mere ` 25 crores in March 1965 to ` 1,21,778 crores to September 2003. Regarding the global scenario the study pointed out 10 mutual funds worldwide, 8 were bank sponsored. In the U.S total number of schemes were more than the total numbers of listed companies, while in India there were just 386 schemes. Certain shortcomings were also pointed out like unrestrained fund raising by schemes without adequate supply of scrips created severe imbalance in the market. Mutual funds had to depend on the broker network and product structuring was yet to be done to tap the target customer.

Saha (2003) carried out an overall study of the present scenario of Indian mutual funds industry. The study also briefly explained what exactly mutual funds are, their evolution, its types, advantages attached with them and how to choose a specific mutual fund for investment purposes. The factors which were listed for consideration for choosing a fund were the likes of historical records, funds overall performance in all schemes, funds consistency in beating up the market in which it was invested, stock market index and the current inflation rate. In this study it was found that the mutual funds which dawns over India is Unit Trust of India. In regard to the present scenario it was concluded that the trend was in favor of open ended funds, investors were then more aware of the working and benefits of mutual funds, more money was flowing into the mutual funds and the gap between the net asset value and their market price was reducing day by day because of the more educated and aware investor entering the market. The study also highlighted the awareness of investors which had led to the start of a new industry in mutual funds rating agencies as the investors look for an unbiased source of information, the secondary market brokers have become more professional and a more sophisticated infrastructure had been created. The new structure included the custodians, depositories screen based confirmation and inter institutional trading. The study also brought into light the recommendations of the NAV Committee and Mutual Funds, 2000 which had been approved by SEBI. Such recommendations broadly included giving more operational freedom to mutual funds in shaping their products, deciding their fund size unilaterally hence the scraping of minimum subscription clause.

Elango (2004) did a comparative analysis of the NAV of a few selected private, foreign and public sector sponsored funds of India to identify the best sector as well as the fund scheme which had registered an increased NAV. The study also tried to find out that whether past performance had any association with the future rise or fall in the NAV, and pin point the sector which had most fluctuations in NAV during the study period of April 1999 to
March 2002. For this purpose 15 public sector sponsored funds and 15 private/foreign sector funds were selected. An average NAV of both the sectors was calculated which came out to be a satisfactory `17.83 for the private/foreign sector and a poor `11.98 for the public sector. In case of maximum NAV a private sector scheme recorded a NAV of `52.30 in 2000-01 whereas in public sector sponsored the maximum NAV recorded was a mere `27.55 in the same year. The analysis further showed that during the study period of 36 months the public sector sponsored schemes had grown at 23% while the private/foreign sector had achieved a growth of 78%. Analytical results also revealed that in both the sectors past was an indicator of the future performance of mutual funds i.e. there was a strong influence of previous NAV figures on the future NAVs. It was also concluded that as compared to public sector, private/foreign sector showed a more consistent performance during the study period. The study at the end suggested that the more risk seeking and aggressive investors should opt for private sector as they yield higher returns.

Hindustan Times (2004) in a report had highlighted the fall of mutual funds industry in the last six years i.e. from 1998 – 2004. The report clearly said that the money invested in the mutual funds industry was being drawn out. Even as November '04 saw a small appreciation in assets under management (AUM), due to an increase in Net Assets Values (NAV) of equity-oriented funds, net inflows were on the unconstructive side for five straight months. Over the history of mutual funds industry in India fluctuation has always been a trademark among all the various asset classes. But the overall share always amplified or remained equal. But in 2004 it was concluded that retail investors, high net worth individuals, and even the corporate sector had started discovering other means of investing their savings except Mutual Funds.

Singh (2004) in his study took a sample size of 260 respondents to judge the perception of investors towards mutual funds and selected a few mutual fund schemes to estimate their performance. During the period of study the growth was registered in terms of resource mobilization. It was also found that UTI still held the maximum share of money invested in mutual fund industry, but a trend seemed to be moving towards private sector since 1998-99. The study concluded that a large number of investors were not interested in putting their money in mutual fund schemes and around 50 percent of the existing investors had decided to withdraw their investments from them. In context to the performance of mutual funds among equity diversified scheme category ICICI Prudential and Franklin Templeton mutual funds had used the diversification policy well. The study also showed that
in the same category Franklin Templeton and Pioneer ITI had shown average beta, which indicated less riskiness of portfolio as compared to the market portfolio from return point of view, alliance capital funds schemes have performed much better than the market average. Alliance capital fund schemes have lead all the other mutual funds in case of Sharpe index, Treynor index and Jensen measure. The study also highlighted that regarding the prospects of mutual funds in Indian economy, about 20% of investors surveyed came under the category who wanted to make fresh investments in mutual funds though half of the existing investors covered under the survey were opting to withdraw their money.

Sharma, Jain and Kartik (2005) in their paper attempted to study the growth and performance of mutual fund industry in India from 1963 to 2003. The study found that growth rate of number schemes was more than 20% during the period 1996-2003. This was purely attributed to the entry of private and foreign players in this sector. It was also observed that debt and income funds have a wider reach in terms of AUM as they offer fixed return with less risk associated with them. The study also showed that joint ventures in private sector dominated this industry as their AUM is 59.46% of combined AUM of all companies. It was concluded that though there was tremendous growth due to privatization, only 3% of India’s savings were directed towards mutual funds. To make mutual funds more popular it was suggested that certain critical issues should be brought up for discussion like reduction of cost of management which at .80% - 2.01% was significantly higher than the world average. The paper also pointed out that two third of assets under management belong to companies and institutions. In reality mutual funds were made for small investors but their this very objective was not being fulfilled.

Pasricha and Jain (2005) in their paper titled “Performance Evaluation of Mutual Funds” intended to study the quarterly return of all schemes for the period January 2003 to December 2004, total risk of all the schemes for the same period, to know whether return and risk are proportionate with each other and weather the schemes outperformed the market index in terms of risk and return. For this study NAV on the first date of every quarter was considered. BSE SENSEX and sectoral indices were taken as benchmarks. 91 Day Treasury Bill rate was taken as risk free rate of return. For analysis Sharpe, Jensen and Treynor’s measures had been used. On the basis of the study it was found that growth schemes had outperformed all other categories of mutual funds schemes since their inception. These were followed by tax saver schemes, sectoral funds and balanced funds. A comparison with the benchmark indices indicate that all the growth and sectoral schemes and majority of tax
saving schemes had shown both risk and return higher than the benchmark whereas most of the balanced schemes had shown risk and return below the benchmark. A comparative analysis of public and private sector showed that most of public sector sponsored schemes have compounded annual returns below 10% as against only 15.38% of public sector sponsored schemes showing return below this level.

Kaur (2005) wrote a paper on mutual funds as an emerging investment instrument in the Indian capital market. A study for the period of March 2000 to March 2005 was done. For this period data related to total number of schemes, category wise total number of open ended schemes, category wise total number of close ended schemes, sector wise total resources mobilized by mutual funds industry, category wise and nature wise resource mobilization by mutual funds was collected. Thorough analysis of all this data in simple tabular form showed that gilt and liquid schemes had grown significantly. In terms of resource mobilization gilt and liquid schemes topped the charts of popularity and these also accounted for more than 80% of the total resources of all companies taken together. Open ended schemes under all categories had increased but close ended schemes showed a reverse trend. Same was the result when resource mobilized was compared of both schemes. Thus the paper derived three major conclusions. First, all the schemes had shown a decrease in absolute resource mobilization except in case of growth schemes where an increase of 20.8% was seen. Secondly there was a clear shift in mutual fund resources from equity to fixed income funds and lastly that private sector funds were the most dominant players in this industry.

A report in Economic Times (2005) found that mutual fund’s coverage of corporate bonds will increase upto 80 percent by the ending of 2005 from its then level of 65 percent in August 2004 because of their lower maturity periods. This was a conclusion of ASSOCHAM after the study of portfolios of all the debt based mutual funds floating in the market. The mutual funds had invested 44 percent of their debt portfolios in corporate bonds issued in year ended December 2003. As against this observable fact, the mutual funds kinship to government securities was to trip to about 12 percent towards the end of that year, from their August 2004 level of 17 percent.

Raychaudhuri (2005) in his paper studied about persistence in mutual fund performance in India, from 2001-2004. It used several tests from the literature to conclude that there is persistence in the mutual fund market. It was found that performance measures that were constructed using large lags of data are better predictors of future performance. In
addition, the predictions of performance for longer future periods were superior to predictions made for short-run future periods. Finally, it was concluded that auto-regression tests for persistence may fail despite the presence of persistence.

Mohanan (2006) in the article pointed out that the mutual fund industry of India had seen striking improvements in magnitude as well as excellence of products and services being presented in recent times. Indian mutual fund industry was one of the top growing sectors in the Indian capital and financial markets. Mutual fund’s AUM grew by 96% between the end of 1997 and June 2003 and as a result it rose from 8% to 15% of GDP. Besides institutional investors individuals constituted 98.04% of the total number of investors and contributed US $12062 million, which was 55.16% of the net assets under management. The industry had matured in volume and managed total assets of more than $30351 million. Of the various sectors currently operating in the market, private sector accounts for nearly 91% of the total resources mobilized which shows its overpowering supremacy in the Indian market.

A paper by Rao and Mishra (2007) pointed out that annual composite growth rate in mutual funds industry was expected to be 13.4% during the rest of the decade and the global real estate consulting group Knight Frank had ranked 5th in the list of 30 emerging retail markets and predicted an impressive 20% growth rate for the organized retail segment by 2010. Real estate was growing faster than any other sector in India. In the period 2003-07 this sector had grown at the rate of 30% - 40%. The domestic real estate market was among the high yielding markets globally. Yields from prime grade A office space were 9% - 12% here, compared to 4% - 7% in US and Europe. When two sector of the same economy are at their peak heights nothing else than the combination of both can maximize returns for the investors. This had been well understood by the fund managers and hence real estate was made an integral constituent of portfolios of mutual funds. In fact real estate mutual funds became the new rage in this sector. These funds invested directly or indirectly in real estate and are governed by the provisions of SEBI (mutual funds) regulations. The combined impact of liberalized FDI norms and the recent SEBI’s decision to permit real estate funds are expected to push the reality sector to the heights of US$102 billion in the coming 10 yrs. At the time of this study i.e. august 2007 there were 21 real estate funds operating in India which were valued at US$4.7 billion. As per this paper real estate mutual funds are affordable, reduce risk, and provide sound advice & liquidity to the small investors.

Andrews (2007) wrote a paper to specifically study the performance of equity funds in the Indian mutual funds industry for the period starting from 1993 to 2005. The year 2004-
05 showed that 96% of diversified equity funds outperformed the markets as compared with the return delivered by the BSE SENSEX. This had been the best performance of equity diversified funds in the last 12 years. While SENSEX gave a return of 11% in 2004, equity funds on an average gave a return of 24% during the same period. The performance figure of the first two quarters of the calendar year 2005 also revealed a better position of equity mutual funds. In 1993 and 1994, 67% of equity funds had higher average return than the SENSEX. While in 1999 it was 77%. But from 2004-2007 when equity markets had been bullish; the extent of outperformance had risen sharply. In 2002, it was 90% which increased to 93% in 2003 and 96% in 2004. But during 1995, 1996, 1998, 2000 and 2001, the equity market had given negative returns. During this period, equity funds had just about managed to give the same returns. In two out of five times, it gave higher returns than the market. It is noteworthy that the year 1998 was the only year when equity funds managed a positive return of 4% that too when the SENSEX dipped to 17%. This paper also analyzed the top performing equity mutual funds of the year 2005. Past performance of ELSS was compared with normal equity funds; it was found that in the last one year while a normal equity fund gave an annual average return of 33.6%, it was 41.3% for ELSS funds.

Noronha (2007) in the case study of three mutual funds suggested that amongst the three main models to evaluate the performance of funds, which model should be applied in which case. The three models considered were Jensen’s, Sharpe’s and Treynor’s. And the three mutual funds used for the study were from Franklin, HDFC and Prudential ICICI. The four schemes selected were general purpose equity scheme, I.T sector fund, tax plan and index fund. This article also brought into light the various risks associated with mutual funds i.e. liquidity risk, credit risk and market risk. Regarding Sharpe’s model for evaluation of mutual funds it was said that it used standard deviation as a measure to evaluate a fund’s risk-adjusted returns. The higher a funds Sharpe ratio, the better it is. This measure adjusted the performance for risk as well uses the capital market line as the benchmark. It considered the overall risk of the portfolio. For Treynor’s model it was concluded that it was a ratio of return generated by the fund over and above risk free rate of return during a given period and systematic risk associated with it. It indicated a fund’s volatility relative to a particular stock market index. The Treynor’s used the security market line as a benchmark. About Jensen’s model the paper said that this measure involved evaluation of the returns that the fund has generated vs. the return actually expected out of the fund given the level of its systematic risk. The surplus between the two returns was named alpha.
Review of Literature

Sharan (2007) discussed the reforms undertaken in the Indian mutual funds industry and their impact. The first step towards reforming was the induction of SEBI (Mutual Funds) Regulation 1993. Under this various measures regarding organization structure, documents of the schemes, ceiling of investment, distribution of profits and checking of malpractices were implemented. Second part of reforms was the introduction of SEBI (Mutual Funds) Regulations 1996. This regulation took steps connected with the net worth of the AMC, re-issue of re-purchased units, weekly publication of NAV and the investment norms. Various other such measures were introduced in the financial year 2000-01, 2001-02 and 2002-03. These included disclosure of Non – Performing Assets and benchmark indices, maintaining records of every decision, uniform way to calculate sale and re-purchase price of units and a risk management system. The second part of the article dealt with the impact of all these regulations on the performance of Indian mutual funds in terms of mobilization of recourses and the investment of funds in money and capital market. But since there was always a lag between the implementation of changes and the accrual of its effects, the major improvements were seen after the year 2002-03. A major question related to the influence of mutual funds on the stock market index was also answered using the amounts of Assets Under Management of debt, equity, money market and government securities since the financial year 2000-01 to 2006-07. To be more compact on the matter correlation co-efficient between the monthly figures of net investments of mutual funds in equity shares listed at the BSE and the monthly average (closing) of BSE SENSEX during the FY 2006-07 was calculated. The correlation co-efficient was found to be 0.3726 which reflected that there was no influence of mutual funds on the stock market index. But still the likelihood of mutual funds affecting the stock market index in a specific sector where their holding was intense could not be annulled.

Mittal and Gupta (2008) wrote an article on the preference and pattern of investment in mutual funds. The main objectives of the research paper was to find out awareness of the investors about mutual funds, to study the factors which affect the investor’s decision to invest in mutual funds and to study the preference of investment in mutual funds as compared to other investment options available. To simplify their study they categorized all the types of mutual funds into three categories as follows:

Category I: open ended funds, close ended funds and interval funds

Category II: growth funds, income funds, balanced funds and money market funds
Category III: tax saving schemes, industry specific funds, sectoral funds, index schemes, load funds and no-load funds

The study revealed that the mutual funds have a comparative advantage over other investment options. This is because they provide high return, safety, liquidity and convenience. The public was satisfactorily aware about them. On comparing it with other investment options it was ranked third most preferred tool of saving after insurance policies and government bonds which came first and second respectively. It was also found that equity schemes were failing because of inefficient management of funds. The paper also recommended that the investors must be advised to invest in debt as it gave them a proper return of 10% to 14%. The study also revealed that despite the public being completely aware of mutual funds, they were still reluctant to invest in them. However the competition was basically from insurance sector.

Ghosh (2008) in his article pointed out that assets of mutual funds industry worldwide have grown by 185% between 2000 and 2006. In comparison, Indian assets outgrew at a staggering 446% whereas of the US only grew by 158% and Europe by 242%. As on September 2007 the industry stood at $ 24.32 trillion out of which 41% of the asset is in equity. The article also quoted a study by Invest India which revealed that there were about 321.8 million paid workers in India. Of this only 5.3 millions had an experience with mutual funds which was less that 2% of the total workforce. What made this fact more interesting was that 77% of this 2% resided in metros and tier I cities. 4 million of the 5.3 million came in the ‘90,000 - ‘5,00,000 income bracket. All these figures just highlighted the scope for mutual funds market. There was a huge market which was still untapped. A lot of work was still to be done because India was the fastest growing markets for mutual funds which attracted a host of global players. The combined effect of increase in fund houses, schemes and people willing to save had been an increase in total fund mobilization by a whopping 124.93% during April – December 2007. Indian household had also increased their exposure to the capital market. Interestingly the mutual funds proportion in this had increased. In fact there had been more than 2000% growth in the assets coming to them in the last three years. The article also pointed out that the investor profiles of Indians had also changed. The investors are younger, more aware and adventurous.

Pandey (2008) in his paper studied the relationship between savings and investments given by Prof J.M.Keynes as:

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\text{Investment} = \text{Savings}
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The paper also brought into light the market capitalization of the Indian mutual funds industry since the year 1991 upto 2006. The resources mobilized in this period were divided for further evaluation in categories such as bank sponsored, institution, private sector and joint ventures. The study had two major conclusions. The first being that the behavior of savings rate in India during the reform period proved to be an enhancement in financial savings, which gave an opportunity for diversification across financial assets and materialization of marketable returns. All this was possible because the government dejected the deposits restraining the savings in supplementary sources and to some extent the government’s taxation policy supported the investments in mutual funds. After all mutual funds were conceived as institutions for providing small investors with avenues of investment in the capital market. The second conclusion was that in the year 1991, bank and institution sponsored mutual fund had attained maximum share holding of 89.99% in mutual funds industry. But in 2006 bank and institution sponsored mutual fund has only 21.7% market share. This could be interpreted as that the mindset of the Indian investors had been changing. Now they were more for performance oriented private sector funds.

**Dutta** (2009) in his article compared the growth of Indian mutual funds industry with that of the banking industry in the last two decades. Banking industry was undoubtedly ahead of the mutual funds industry in terms of size but mutual funds industry had gained momentum in the past few years. Gross mobilization by the mutual funds industry picked up post 1999 by 74.03%. Although net resource mobilization by mutual funds industry as on 2006 over 1993 had increased at a CAGR of 13.37% lower than the growth of deposit of all scheduled commercial banks over the same period i.e. 16.42% in the post 1999 scenario there was striking increase in the net resource mobilization. Against outflow of `950 crores during the year 1989-99 there was a huge inflow of `18960 crores during the following year 1999-00. To stay at par with international standard the article suggested that the Indian mutual funds industry should increase penetration, diversify products and use better risk mitigation techniques.

**Pournima, Dhume and Ramesh** (2011) in their study evaluated the performance of the sector mutual funds I relation with the market performance using different approaches of performance measures. They also studied the risk-return of the sector funds. Sample consisted of 40 open ended schemes from banking, FMCG, pharmaceutical, infrastructure and technology sector. 6 funds are selected from banking sector, 5 from FMCG sector, 34 from infrastructure sector, 8 from pharmaceutical sector and 7 from technology sector. BSE
sector specific benchmarks were also taken for comparison. 365 days Treasury bill was considered for risk free rate of return. Major parameters on the basis of which results were derived were standard deviation, R-square, alpha, Sharpe’s ratio, Treynor’s Ratio, M squared measure and information Ratio. The evaluation of the data collected and calculations made on it of the open – ended, sector specific mutual funds based on equity portfolio revealed that all the sector funds have performed better than the market according to Sharpe’s Ratio and Treynor’s Ratio excluding Infrastructure sector funds. FMCG sector is the lowest volatility sector with low standard deviation and beta value having lower risk whereas banking and infrastructure sector shows highest degree of volatility subject to high risk among all the sectors considered together.

Rao and Daita (2011) attempted to analyze the influence of fundamental factors such as economy, industry and company on the performance of mutual funds. Effort was also made to carry out a detail analysis of the economy through collection of monthly data pertaining to the key macro economic variables. Such variables were domestic savings, RBI bank rate, forex reserves GDP, per capita GDP and wholesale price index. S&P CNX 500 index was taken as the benchmark. Covering a period of 228 months spread over 19 years. Casual relationship between mutual funds market and real economic variables was studies. Present status and product offering of mutual fund industry in India was explored. Characteristics of funds which affect the performance of Reliance Capital Asset Management Company were explored. Techniques applied were Correlation matrix, Dickey – Fuller test and Granger causality test. It was evident from the study that the real economic variables considered during the period of the study were not significantly influencing the investment in mutual funds and even to predict the market movements. The study has shown that the state of the economy neither has a significant bearing on the mutual funds market nor on the health of mutual funds. The study thus highlights the fact that there are certain other macro economic factors that might be exerting influence on the investments of mutual funds. The article at the end also suggested that a further research can also be done in the direction to reveal such impacting variables. The industry analysis revealed that the entire mutual fund industry is dominated by a few players with huge shares of their AUMs.

Raju and Rao (2011) evaluated the performance of selected mutual fund schemes in the framework of risk and return during the period January 2008 to December 2010. The measures of performances used were Treynor Ratio, Sharpe Ratio, Jensen measure and Fama
components of performance. The study was based on secondary data. The 91 day Treasury bill rate was taken as the risk-free rate of return. The monthly net asset value of 20 mutual funds schemes which consist of four sectors: banking sector funds, FMCG sector funds, Index funds and Infrastructure funds, for the three years period were used to calculate the rate of return of selected schemes, which are compared with market return represented by S&P CNX Nifty and risk-free rate of return. The results showed that failure of many schemes in performing better than the market, low average beta, disproportionate unsystematic risk, mismatch of the risk return relationship in some scheme, failure of infrastructure and index schemes were the other significant observations of the study.

**Gupta** (2011) in a study on Indian mutual funds industry’s current state and future outlook emphasized reasons behind the growing importance of mutual funds in India. Major reasons quoted were like increase in domestic savings to give a glimpse on the current status factors like growth in AUM, profitability, AUM to GDP ratio, increase in the variety of products, improvements in distribution channels and structure of the industry were shown. Major reasons for such increase in the importance of mutual funds in India were increase in the domestic savings, higher level of yield, liquidity, security and professionalism and income tax exemptions. Amongst a few problems which were pointed out in the study were that they are externally managed, no guaranteed minimum return and lack of transparency. One major point which came out from this study was that mutual funds were too busy racing against each other that they ignored their other competitors i.e. other investment instruments. Mutual funds also faced certain challenges which could prove to be hindrance for them in the near future. Low levels of customer awareness, limited focus on increasing retail penetration and beyond top 20 cities, lack of innovation in product offerings and flexibility. Multiple regulatory frameworks is another test for them. The three major drivers which can drive this industry towards higher levels of success are retail participation, innovation in distribution and institutional participation. This paper concluded that structural liberalization policies, the Indian economy no doubt is likely to return to a high growth path in a few years. Hence mutual funds organization is needed to upgrade their skills and technology. It has to overcome the bottlenecks in the growth of this industry. There is a need of strong regulatory framework, transparency and disclosure policies, customer involvement and wider approach to cover tier 2 and tier 3 cities. The paper also forecasted that this segment of the Indian financial system is to witness rapid growth in AUM over the next few years. Though the
industry is facing challenges of achieving sustained profitable growth while increasing retail penetration and expanding the reach of mutual funds into rural areas.

2.2 INTERNATIONAL STUDIES

Tobin (1956) was more interested in the implications for the macro economy like Markowitz who focused on the rational investor. Tobin used the mean-variance approach to study the choice between safe liquid assets and risk assets. Tobin points out that the fundamental basis of the M-V approach was that the securities were imperfect substitutes for one another. In the same article Tobin showed that the optimal portfolio for any investor is a combination of the optimal portfolio of risky assets and a portfolio of risk free securities. This speaks of investor’s ability to separate the decision about investment proportions among risky assets from the decision with respect to investment proportion between risk and risk-free assets. This property is termed as monetary-separation.

Treynor (1965) in his paper suggested a brand new way for evaluating the quality of management of investment funds. A sample of 54 U.S mutual funds were studied from which it was concluded that 4 out of every 5 verified definite characteristic line patterns with correlation co-efficient equal to or more than 90%. For performance appraisal sample data associated with 20 authentically managed funds was considered for the years 1953 to 1962. These figures were plotted for two levels of market returns i.e. 10% and 30%. After studying this it was concluded that the ranking of the funds remained the same for both the levels of market returns. The study also pointed out that deviation of plotted points was justified by fluctuations in the general market level. This happened when not all points are lying on the characteristic line. Moreover to transact with a portfolio having a specific fund instead of single fund a line called portfolio – possibility line was used with an objective to connect expected return of a portfolio containing the fund with the portfolio owner’s risk preference. By all this a notion of fund performance which takes investment risk into consideration and a way for rating fund management performance were devised. This further made a graphical technique directly functional, also devised for the same purpose. The article also summed up that as risk in a diversified fund is sum of the reactions to general market fluctuations and fluctuations attached with specific securities held by the fund, if a fund is appropriately diversified, the second risk may tend to even out.
Sharpe (1966) studied the performance of 34 open-end mutual funds during the period 1954-63 by analyzing annual rate of return that was based on the sum of dividend payment, capital gains distributions and changes in net asset value. This was done by substituting the earlier capital–market model dealing with future predictions regarding performance which uses expected return and predicted deviation values with actual return and actual standard deviation values which were denoted as Ai and Vi respectively. The paper also tried to appraise performance of mutual funds with an uncomplicated yet theoretically momentous measure that considered both average return and risk. Subsequently the model signified that ex-post values for Ai and Vi for competent portfolios should lie along a straight line and that too with higher values of Ai connected with higher values of Vi. Results of this study showed that funds with great average returns characteristically show signs of superior inconsistency as compared to those with little average returns. Furthermore the relation was just about linear and important. On the other hand some other funds gave both a larger value of Ai and a lesser value of Vi. Therefore to analyze this difference in effectiveness Tobin effect had been rebuilt by substituting A and V for E and hence to give this equation: $A = p + (A_i - p/V_i) v$ and the given name to this equation was Reward to Variability or $R/V$ ratio. Of 34 funds under scrutiny, $R/V$ ratio differed noticeably from 0.78 to 0.43. When market was taken as in a perfect position and managers as efficient diversifiers of risk then the disparity was debated as either temporary or due to unnecessary expenditure by some of the funds. Others attached divergence in management skills with it. For this purpose pre–1954 data had been used to forecast performance from 1954 to 1963 to compare $R/V$ ratio. The funds were ranked in each period as best R/V which came to be 1 and worst R/V which was 34 and then these values were plotted. The broad rising trend was recorded signifying that funds standing low in the early period were likely to rank low in the later time also and vice-versa. Value of spearman correlation co-efficient was 0.3157 and $t$–value for slope co-efficient was 1.88 implying that variation in performance can be foreseen, even though not exactly. Also there was no guarantee that past performance was always the finest base of future performance. This study further as an alternative of using total variability as a measure of risk as used in $R/V$ ratio, used instability of fund as a measure of risk and invented an expression for this purpose as $TI = Ai - p / Bi$. Using the rankings of funds based on TI computed from 1944 – 1953 data to predict rankings based on performance which was measured by $R/V$ ratio in the subsequent 10 years gives to some extent better results than those calculated before. The rank correlation is much higher at 0.454 instead of earlier 0.360.
Correlation co-efficient is 0.4008 and t-value for the slope co-efficient is 2.47. Therefore it could be said that TI appears to be a better analyst. As regards finding difference in performance original sample of 34 funds were ranked on the basis of the ratio of expense to net assets during 1953. They ranged from 0.27% for rank 1 upto 1.49% for rank 34. Results had a propensity to maintain that good performance was linked with low expense ratio. Finally regarding comparing performance with Dow Jones Industrial Average the outcome showed that average mutual fund managers select a portfolio which to an extent was as good as the Dow Jones Industrial index. This was parallel with the previous conclusion that all other things unchanged, lesser a funds expense ratio, better the results achieved by its stockholders.

Jensen (1968) in his paper entitled “Performance of Mutual Funds in the Period 1945 – 1965” derived a risk-adjusted measure of portfolio performance (now known as Jensen's Alpha) which estimated how much a manager's forecasting ability contributes to the fund's returns. This piece of research applied the measure to estimate the predictive ability of 115 mutual fund managers in the period 1945-1964 - that is their ability to earn returns which are higher than those we would expect given the level of risk of each of the portfolios. The study showed that not only the fund managers were unable to predict prices enough to outperform but also that none of the funds were able to perform excessively better than expected. The formula suggested in this study to evaluate the performance of the funds was:

$$\alpha_j = \frac{R_p - \left[ R_f + \beta_i (R_M - R_f) \right]}{\beta_i}$$

- $R_p =$ portfolio return
- $R_f =$ risk free rate of return
- $\beta_i =$ beta of portfolio
- $R_m =$ market return

Fama (1972) in his paper entitled “Components of Investment Performance” showed a breakdown of performance of a mutual fund. In this study the returns from a portfolio were divided into two parts. First being the return from security selection and second being the return for bearing the risk attached. Security selection was further divided into selectivity and compensation for diversification. Risk on the other hand was divided into total timing and total expected risk. The Eugene Fama model was an extension of Jenson measure. This model
compared the performance measured in terms of returns of a fund with the required return proportionate with the total risk associated with it. The difference between these two is taken as a measure of the performance of the fund and was called net selectivity which represents the stock selection skill of the fund manager. This was because it was the excess return over and above the return required to compensate for the total risk taken by the fund manager.

**Mc Donald** (1974) studied the performance of 123 funds using monthly data for the period 1960-69. His study was based on a CAPM model four measures-monthly mean excess return; reward-to-volatility Ratio, Jensen's alpha and reward to variability ratio were calculated. He concluded that the average fund performance was not significantly different from the market and given fees and expenses they were slightly better.

**Schwartz and Wilde** (1979) deal with the necessity for government intervention in markets with imperfect information. Governments intervene in markets when the percent of uninformed consumers in the market is sufficient to do so. But this is expensive and besides one does not know what level of information is considered adequate for a consumer, besides the focus should be on the market and not the individual. If there exist sufficient number of informed consumers the firm has every incentive to behave competitively. The guiding variable, they point out, is whether non-competitive behavior has occurred in the market. Even then they suggest providing information is a better method than price control.

**Grinblatt and Titman** (1989) in their research paper used the quarterly holdings of selected mutual funds since 1975 till 1984 to get an estimate of their gross returns. This specific sample data was used in union with another sample of net returns of the same mutual funds. Traces of abnormal performance were sought after in the study to estimate the transaction costs and bias in measured performance if any. The tests suggested that the risk adjusted gross returns of some of the mutual funds were notably positive. Admati and Pfleiderer in 1989 had developed a model under which these results proved to be true. The paper also pointed out that previous such studies of the mutual funds have found either no performance or a negative performance by a regular mutual fund. Unusual performances can be observed only by exploring gross returns which do not exclude transaction costs and other expenses. The empirical results also showed that most of the growth and income funds had done better than the capital gain and growth funds, active managers underperformed a reactive investment strategy. No load funds outperformed load funds and low risk funds.
outperformed high risk funds. The paper also concluded that funds with low beta and small assets had operated more efficiently.

**Fama and French** (1992-93) argued that the risks of a portfolio cannot be captured by a single beta. Portfolio risks are multi-dimensional for them. When they studied the US stock returns, for the period 1963-90, they found that the CAPM beta could not explain the entire return variance. They proposed a three factor model to better capture the risk. Apart from the market risk they included the Small cap stock returns - Minus-Big cap stock returns (SMB) factor to capture the 'size risk' and, also the High-Minus-Low (HML) factor to capture the 'value risk'. They had analyzed the limitations of the single factor CAPM and proposed the APT. 39 find that historically small cap stocks have delivered better average returns (in the US market) and hence, can be an important explanatory factor for determining the sources of performance of a fund. The value risk is captured by taking the difference between the returns of the high book-to-market (B/M) stocks minus Low book-to-market stocks. Here they find that value stocks deliver better returns when the market corrects for it’s over reaction. Their model proposed increased the R-square or the explanation for fund performance compared the single factor CAPM models. This was done by essentially accounting for the portfolio differences between funds or the style of funds. The positive alpha probably due to the style and not necessarily due to portfolio selectivity and hence, for a truer measure of alpha we need these additional factors according to them. Several tests were carried for the Fama-French model. Kothari et al (1995) find that there is no 'value' effect but certainly a size effect. We take these factors into account when discussing the impact of size of fund on returns. But we do not consider the multifactor model proposed by them rather we use the single factor CAPM but separate the funds on the basis of the portfolio and use a dummy to capture the differential effects of fund style on fund alpha.

**Grinblatt and Titman** (1993) in their article introduced a new measure of portfolio performance and applied it to study the performance of a large sample of mutual funds. In contrast to previous studies of mutual funds performance, the measure used in this study employs portfolio holding and did not require the use of a benchmark portfolio. It found that that the portfolio choices of mutual fund managers, particularly those that managed aggressive growth funds earned significantly positive risk adjusted returns in the period 1976-
The traditional method of evaluating portfolio performance did not utilize information that was often available about the composition of the evaluated portfolio.

Canner, Mankiw and Weil (1994) in their paper examined popular advice on portfolio allocation among cash, stock and bonds. Mutual funds separation theorem stated that all investors should hold same composition of risky assets i.e. more risk-averse investors should invest in more risk less assets. Unlike the theorem popular advice says that aggressive investors hold a lower ratio of bonds to stocks than conservative investors. The study is divided into various sections in the first section the separation theorem of mutual funds is explained while in the second section popular advice is elaborated. In the third section the optimality of the popular advices is studied. Here assumptions like absence of a risk less asset, preference that depends on more than the mean and variance on returns, portfolio choice in dynamic situations and the existence of non traded assets. Because of the investors being irrational there was a difficulty in explaining the popular advice. The cost of holding non optimal portfolios was also studied in this paper.

Malkiel (1995) in his article pointed out that most of the recent studies had concluded that equity based mutual funds provided healthier returns and significant resolution in performance. This article also tried to analyze the performance of all the existing equity mutual funds for the year since 1971-1991. 1970s was a perfect market in which all investors could earn equal levels of profits irrespective of their knowledge and experience because all vital information was being so rapidly and competently being absorbed by the prices of the funds. On the other hand in 1980s returns were positively correlated in the short span and negatively correlated in the longer run, in fact they were not independent from time to time. Predictability was a main feature of this decade based on parameters like dividend yield, price – earnings ratio etc. After comparing the performance of equity funds with benchmarks it was concluded that the mutual funds had not performed up to the set standards both before and after exclusion of expenses from the profits generated. In addition uniformity in performance persisted throughout 1970s but the same was absent in 1980s.

Falkenstein (1996) in his study on preference for stock characteristics by mutual funds showed that for the years 1991-1992 investors had a significant preference towards stock with high visibility and low transaction cost and were averse to stocks with distinguishing instability. This paper revealed preference of U.S. open ended mutual funds for various stock characteristics. The most unquestionable conclusion that was drawn was that mutual funds preferences are not totally driven by risk factor alone, and the basis of this
conclusion was the data collected by Morningstar regarding portfolio holdings. Mutual funds showed a significant preference for stocks with high volatility. In regard to transaction cost, mutual funds showed a dislike for low cost stocks while demand was time after time increasing in liquidity. Accept for small-cap funds which were formed to invest in small firms, other mutual funds showed an aversion to small scale industries. The study also revealed that the mutual funds tend to avoid investing in firms about which little information is available in terms of newspaper articles since the time of listing on the exchange. The final result of this study was that in case of transaction cost mutual funds exhibit a repugnance to low price stocks and a non-linear preference towards stock with high unpredictability.

Carhart (1997) in his study by a sample free of bias verified that certain common factors involved in stock returns and investment expenses were the main reasons behind persistence performance of equity mutual fund’s mean and risk adjusted return. Persistence in mutual funds did not occur due to advanced stock picking skills. Rather factors like dividend return, cost of transaction, capital appreciation explained all the predictability in mutual fund returns. Only the strong persistent underperformance by the worst return mutual funds remained irregular. Many other researchers before this had found evidence of persistence in mutual funds performance over short term period of one to three years and point the persistence to hot-hand or common investment strategies.

Daniel, Grinblatt, Sheridan and Wermers (1997) developed and applied a new measure of portfolio performance which used standards based on the distinctiveness of stocks held by the portfolio that were to be evaluated. The benchmarks were derived from the returns of 125 inactive portfolios that were coordinated with stocks held in the evaluated portfolio on the basis of returns, market capitalization etc. Based on these benchmarks characteristic timing and characteristic selectivity measures were developed that detected the fact whether or not portfolio managers time their selection on these characteristics and whether they could select that stock which outperforms the average stock having the same characteristics. The basic motive of this study was to find whether mutual funds could include those stocks in their portfolio which allowed them to bring in a major part of the expenses that they made as the amount of expenses produced by this industry was a whooping $10 billion for the year of the study. The researchers applied these measures to a new database of 2500 equity funds from 1975-1994. The results showed that the aggressive – growth mutual funds in particular, exhibited some selectivity ability but no characteristic time ability.
Detzler (1999) in his this specific paper studied the risk and returns uniqueness of global bond based mutual funds during the years from 1988–1995. These aggressively managed mutual funds did not exhibit finer performance, net of expenses, as compared to a wide array of benchmarks and performance was negatively correlated to fund expenses. During the taken study period, returns on global bond mutual funds were responsive towards exchange rate movements, even after managing for local currency returns on respective country bond indices. The funds had high exposure to the Canadian, the European and the US bond markets. Above all they were least susceptible to changes when it came to the Japanese Bond index and movements in Japanese Yen rates. The funds did not surpass a US Bond index performance, signifying that expenses may have outweighed diversification benefits during the sample period.

Edelen (1999) in his research paper studied the open-ended equity mutual funds which provided a diversified equity options with modest direct cost to investors for liquidity state. This study credentials a statistically considerable indirect cost in the shape of a negative relation among a fund's irregular return and investor flows. Controlling of this indirect cost of liquidity altered the standard fund's atypical return net of expenses from a statistically important −1.6% per year to a statistically irrelevant −0.2% and also entirely explained the pessimistic market-timing performance found in this and most of the other studies of mutual fund proceeds. Consequently, the widespread judgment of negative return performance of open-ended mutual funds was attributable to the costs of liquidity-motivated trading.

Blake and Morey (2000) examined the Morningstar rating system as a predicator of mutual funds performance for U.S. domestic equity mutual funds. Ability to predict both unadjusted and risk adjusted returns of the Morningstar rating system was also compared with other predictors in the industry. This study was important for two main reasons first being that Morningstar was a 5 star rating system and secondly because highly rated funds attract more cash inflows. The sample of mutual funds was divided into two groups namely seasoned funds 1992-1997 and complete funds 1993. In the first group each fund had atleast 10 years of returns at the time it was rated by Morningstar and also it had to be open at the time they were rated. In the completed 1993 sample all open funds rated by Morningstar and listed as aggressive growth, equity-income, growth, growth-income or small company were included. This led to the inclusion of younger funds also which had between 3-5 years of return history. About the Morningstar ratings it was brought to notice that it rated the funds on the basis of 3,5 and 10 years of risk adjusted return for funds with 10 years or more of
return history, 3 and 5 year risk adjusted return for funds with 5 or less than 10 years of return data and 3 years of risk adjusted return for funds with 3 or less than 5 years of return history. And this risk adjusted return was calculated by the following equation:

\[
\text{Expenses & Load} - \text{Adjusted Return on the Fund} - \text{T-Bill} \\
\text{Max} \left[ \left( \text{Average Category Return} - \text{T-Bill} \right) \text{T-Bill} \right]
\]

Alternative predictor for comparison was chosen to be Sharpe’s Ratio, Jensen’s Single Index and Four–Index Alpha. Dummy variable regression analysis and Spearman–Rho rank correlation test were also conducted. The findings of the study were that Morningstar was able to predict low-performing funds and that there was a very weak statistical proof that the highest rated funds outperform the 4 or 3 star rated fund. The paper also concluded that morning star was just slightly more reliable than its other alternatives studied in this study.

*Chen, Jegadeesh* and *Wermers* (2000) investigated the value of active mutual funds management by examining the quarterly stockholding data for virtually all U.S mutual funds between January 1, 1975 and January 1, 1995 (inclusive) collected from reports filed and voluntarily generated both by mutual funds. Trades of these mutual funds were also considered. The objective of the study was to first find which stock was most widely held by mutual funds at the end of a given quarter. This was done by using the following formulae:

\[
\text{Fractional Holding} = \frac{\text{Number of Shares Held}}{\text{Total Shares Outstanding}}
\]

Second objective was to investigate whether funds systematically tilted their portfolio toward stocks with certain characteristics. In this market capitalization, the ratio of the book equity to market equity, the price momentum and the market turnover of the stocks that the mutual funds hold and trade were calculated. The third intent was to evaluate the performance of mutual funds holdings and trade in terms of aggregate results, mutual funds performance within subsamples of stocks, investment objective of subgroups of mutual funds and portfolio turnover. In that period funds had more and more tried to differentiate their services by specializing in particular stock market. Were these claims entrenched in some exclusive skills of these fund managers, or are they simply marketing strategies planned to position the funds in specific market segments was also found.

The result of the study was that any stock selection skills that funds exhibit did not seem to be related to stock characteristics. Growth oriented funds by and large had better stock selecting skills than income oriented funds and that this difference was most distinct in large growth
stocks. High turnover funds seem to capitalize on their stock picking talent by trading regularly. The paper also concluded that there was always persistence in unadjusted returns on mutual fund portfolio holdings and that past performance was always a good measure of stock selection as well as future performance.

**Dalquisht, Engstrom** and **Soderlind** (2000) investigated the relation between fund performance and fund attributes in the Swedish market. Performance was measured as the alpha in a linear regression of fund returns on several benchmark assets, allowing for time-varying betas. The estimated performance was then used in a cross-sectional analysis of the relation between performance and fund attributes such as past performance, size, turnover etc. The data collected was for Swedish mutual funds since 1992 to the end of 1997. Funds which invested in foreign markets were excluded since they had different risk exposures. NAVs for all funds were obtained from TRUST database of Findata. Furthermore weekly returns were also calculated. Two equity indices were used as benchmarks. First being the general stock market and second being a self composed small firm index. Results showed that money and bond market funds performed badly as compared to equity funds. It was also shown that size of a fund had little impact on equity as well as bond and money market funds. As far as fees structure was concerned a robust negative relation to the performance was proved. Turnover of funds was also calculated as the minimum of purchases and sales divided by the fund size. In case of this attribute some equity funds showed no relation while some showed a positive and reasonably robust relation between trading activity and performance. At the end a strong persistence of performance was found in case of money market funds. The same was absent in case of equity and bond funds. An economically significant survivorship bias was also documented. Equity funds in the public savings program offering certain tax advantages and bond and money market funds performed less well and significantly negative alphas for these fund categories were recorded. On the other hand regular equity mutual funds performed better as compared to others. It was also brought to light that larger equity funds tend to perform less well than smaller equity funds. Larger bond funds seemed to have performed better than smaller bond funds. This paper also indicated that actively managed equity funds performed better than more passively managed funds.

**Gibson, Safieddine** and **Titman** (2000) had studied how taxes, window dressing and other environmental incentives affect portfolio decisions and eventually security prices. The data under study was mutual funds and other institutional investor holdings for the 60
quarters from the first of 1980 to the fourth quarter of 1994, obtained from the Spectrum database. To find whether mutual funds tax laws exert price pressure, quarterly stock returns of losers held by mutual funds were also examined. The results suggested that after the Tax Reform Act (TRA) became effective, mutual funds systematically accelerated the sale of losers prior to their new synchronous tax year end. A similar pattern was not present for funds before TRA. Interestingly it was found that mutual funds started selling the losers in which they held major portions as early as two quarters before their tax year end. Mutual funds waited in anticipation of quarter immediately prior to their tax year end before selling losers in which they held comparatively smaller positions. This proved that mutual fund’s portfolio decisions were subjective in a systematic way not only by tax incentives, but also by liquidity considerations.

Busse (2001) established how mutual funds actively change the risk of their portfolios in retort to past performance and that in comparison to monthly data, daily returns produce much more reliable approximations of funds volatility. It was found that the difference between daily and monthly results arises from biases in the monthly estimates of standard deviations. A sample of daily fund returns from January 2, 1985 through December 29, 1995 for 230 domestic equity funds was taken to test the hypothesis that fund managers actively alter the risk of their portfolios as a reaction to past performance. The sample excluded sector, index and balanced funds. The paper also tried to guesstimate what a fund’s volatility would be at the end of year if it did not change its factor loading or residual risk from the beginning of the year. The methodology adopted was that fund volatility ratios for each year were computed in two different ways. First by assuming the daily returns are independent and second to account for positive correlation in the returns. Moving average process of fund returns was modeled which was calculated twice, once for the evaluation period and once for rest of the period. Standard deviation ratios were also calculated with the monthly returns. Tournaments under the null hypothesis of no strategic managerial behavior, but allowing for dependence were also simulated to examine the size of the \( \chi^2 \) tests and to estimate empirical \( p \)-values. The study concluded that monthly patterns of losers show increased monthly estimates of risk. The daily pattern also indicated that most of a fund’s intra–year change in risk attributable to changes in the volatility of common stock market risk factors was not related to changing factor exposures or residual risk. It was also pointed out that since the daily data provided more precise estimates of volatility, there were chances that fund managers might actively alter their portfolio risk on the basis of past performance.
Droms and Walker (2001) applied the “winner–winner, winner–loser” tactic created by Goetzmann and Ibbotson, Brown and Goetzmann and Malkiel to examine for short-term performance perseverance in international equity mutual funds over the period of 20 years starting from 1977 up to 1996. This test was applied on a database consisting of all international equity funds floating in the market during that period, ranging from a low of 11 mutual funds in 1977 to a soaring of 473 mutual funds in 1996 funds, reflecting the enormous growth of this asset class over the last 20 years. The study was not conscious of any other persistence studies of international equity funds. The results showed statistically noteworthy performance persistence for 1-year holding periods, but zero persistence for 2, 3 or 4-years of time. For 1-year period, taken as a whole, performance persistence was statistically significant at the .001 level. This lead to the conclusion that international equity mutual funds show signs of strong performance persistence for short-term i.e. for 1-year holding periods, but it was also seen that the same persistence by and large faded after the first year. These results were usually parallel with domino effect found by other researchers using the same methodology. Survivorship bias had been an apprehension in practically all the time series studies of mutual fund proceeds. This bias was negligible in this specific study for the reason that whenever each novel fund was added to the database, amalgamating funds continued to be incorporated and adjustments were made for funds that finish operations. The only prejudice was that if any fund clogged and did not merge with an existing fund, that fund would not have returns to be integrated for the coming time periods. Only 28 funds ceased operating in the market over the 20-year period of study during which 490 new funds were introduced.

Khorana (2001) established the impact of mutual fund manager’s replacement on next fund performance. Specifically in this paper it was analyzed that whether underperforming funds in the pre-placement period are able to turn around their performance and if so how long it takes to be a part of the winning group of managers. Perceptible shift if any in the managerial behavior with regard to the change in portfolio turnover rates and expense ratios in the years surrounding managerial replacement was also examined. For this a sample of 393 domestic equity and bond fund managers experiencing replacement over 1979-1991 period were taken from Morningstar’s database and fund families. Of the selected 393 funds 171 were equity and 222 bond based. Further the sample was divided into two groups 239 funds in the negative performance (NP) and 154 in the Positive Performance (PP) group. Four techniques were adopted to analyze the performance a one factor and a four factor
abnormal performance measure, an objective – adjusted performance measure, a matched sample approach and the percentile performance rankings of the funds. Impact of assets flows on managerial turnover was also demonstrated. Finally it was documented that the dismissal of poorly performing managers led to substantial improvements in post – replacement performance as compared to the past performance of the fund. However, based on alphas from a one – factor and a four factor model these fund managers continued to show negative performance in the post – replacement period. In contrast, the sample of positive performance funds in the pre – replacement period experienced a noteworthy decline in succeeding fund performance. The results were consistent with the argument that internal and/or external monitoring systems were successful in reversing the performance of a poorly performing fund. The performance flow relation recommended that replacement of the poorly performing fund managers is preceded by significantly lower asset flows hence limiting the ability of funds to earn higher investment advisory fees in the pre – replacement period. It was also concluded that underperforming fund managers are more inclined to amplify the overall risk of the portfolio for the years earlier than managerial replacement.

A paper by Bergstresse and Poterba (2002) examined the relationship between the succeeding cash inflows to equity mutual funds and the after-tax returns that taxable investors earn on these funds. Earlier studies had recognized that funds with high before tax returns were a magnet for superior inflows. This paper based on a large sample of retail equity mutual funds over the period 1993–1999 gives the confirmation, that after-tax returns had more illustrative influence than before tax returns in illuminating inflows. In addition, funds with large overhangs of unrealized capital gains attracted lesser inflows or else equal than funds without such unrealized capital gains. A huge capital gain overhang discouraged gross fund inflows and also gross outflows, but the inflow effect was more than the outflow effect.

Greene and Hodges (2002) investigated how mutual fund flows that are associated with succeeding fund returns can have an intense effect on the performance of open-end funds. Active trading of open-end funds had an important economic influence on the returns of inactive, non trading shareholders, mainly in U.S.-based international funds. The overall sample of domestic equity funds under study showed no dilution impact. On the other hand the study also found an annualized negative impact of 0.48% on international funds. The same was also concluded approximately as 1% for a subsample of funds whose routine flows were particularly higher. The exchange and pricing policies of mutual funds could therefore have had vital performance-related implications.
Karceski (2002) in his piece of writing projected a substitute clarification of why beta pricing is inferior than it should be based on returns – chasing behavior by mutual fund investors coupled with portfolio options made by these investor’s agents and active mutual fund managers. Mutual fund investors invested in their equity stakes after the market went up and selected funds principally on the foundation of comparative past performance. This affected the investment strategies of active mutual fund managers. In the agency model proposed in this paper the penchant of mutual fund investor to trail returns across funds caused the delegate active mutual funds manager to incline towards high beta stocks. A satisfactorily large actively managed mutual fund sector could cause the equilibrium expected return on low beta stocks to surpass the equilibrium expected on high beta stocks even though conservative risk measures such as standard deviation, beta and performance in down markets had put forward that high beta stocks should require higher expected returns. The active fund managers leaned towards high beta stocks because they did better during bull markets. At the end the fund’s reward for outperforming extremely well during bull markets was larger than its reward for outperformance when markets were down. Aggregate equity fund flows were positively and considerably related to synchronized and lagged market returns. More significantly, the degree of this consequence was huge. It was also brought to notice that mutual funds behavior could persuade fund managers to accept more hard line investment profiles than they otherwise would prefer. The paper concluded that the ability of the mutual funds sector to move stock prices depends on the qualified size of equity fund holdings. The last two decades have witnessed a spectacular rise in the attractiveness of mutual funds. It also suggested that the recent sudden increase in equity mutual funds may be related to beta’s death in early 1980s.

Kochman and Badarinathi (2002) in their paper answered two exciting questions. The first being, are standard deviations relevant when funds, by definition, eliminate the unsystematic component of total risk? The second being how can two respected investment giants of a period for the same fund end up with clearly different standard deviations? For answering these questions standard deviations for the period march 2002 through February 2003 was collected from Fidelity and Morningstar for 25 mutual funds. Using the values reported on their respective websites, it was found that Fidelity’s standard deviation were larger than Morningstar’s counterpart for 22 of the 25 funds. The reason behind this difference might lie in how the standard deviations are calculated – or how they are annualized. While both the websites divulged that fund’s standard deviations were based on
returns from the last 36 months, neither disclosed how the resulting monthly standard deviations were annualized. In bullish market when returns were positive, the Morningstar approach gave annual standard deviations that were better than their Fidelity counterparts. On the other hand in bearish period when returns were negative the relation between Morningstar and Fidelity’s standard deviations was overturned. Another conclusion of the study was that for less volatile returns, the standard deviations for Fidelity and Morningstar were approximately corresponding.

Eling (2008) in his paper “Does the Measure Matter in the Mutual Fund Industry?” clearly concluded that choosing a performance measure is not critical to fund evaluation and the Sharpe ratio is generally adequate. The study quoted here analyzed a dataset of 38,954 funds investing in seven asset classes over 1996–2005 and found that the result was true not only for hedge funds but also for mutual funds investing in stocks, bonds, real estate, funds of hedge funds, commodity trading advisers, and commodity pool operators. Research on hedge fund data that compared the Sharpe ratio with other performance measures, however, found virtually identical rank ordering by the various measures. The most widely known risk adjusted measure is the Sharpe’s ratio. It measured the relationship between risk premium and the standard deviation of return generated by the fund. Hedge funds and other investment alternatives however had non-normal distribution. Because of this many claimed that these funds cannot be evaluated using Sharpe’s ratio. This led to the development of many new performance measure like omega, Sortino’s ratio etc. But Martin Eling’s study stated that despite hedge fund’s deviation from normal distribution Sharpe’s ratio can be used to evaluate their performance.

Ferreira and Ramos (2009) examined mutual fund industry competition and concentration using a sample of 27 countries. The indicators justified that the mutual fund industry was concentrated universally and some industries offered large fund complexities. Countries higher stock market turnover were connected with low level industry concentration. There was more industry competition in countries with improved quality of institutions and where rules and regulation was more unbolt. Bank concentration and concurrent limitations to slot in new activities in the financial industry tended to decrease firm entry in the mutual fund industry. The launch of new funds was completely associated with simplicity of regulation and negatively linked with industry age. On the whole level of fees tends to be higher in countries with low stock market turnover, where industry size was smaller and where foreign mutual fund companies had a larger market share. Moreover, fund
creation seemed to be an imperative feature of competition as it was negatively correlated with mutual fund fees. In general, the fallout of the study did not point towards a direct relation amid competition and concentration. Similar were the findings for the banking industry also. On the other hand, the facts seemed to authenticate the argument that the degree of competition was central for the diversity of products as larger offer of funds was found in more competitive industries.

Barbara ad Sikes (2010) published a paper with the purpose of evaluating mutual fund performance in light of the severe financial crisis the world has faced since 2008. Smart Money, The Wall Street Journal Magazine, in its February 2009 issue identified 100 mutual funds that were supposed to be “great funds” for tough times. The research project focused on evaluating performance of these mutual funds to determine what commonalities they possess to help investors weather the financial storm we are currently dealing with in the investment arena. There is no doubt that the recent financial crisis has caused significant declines in many investors’ portfolios. The Smart Money article addressed the “100 great funds that were the best picks for these tough times.” The criteria on the basis of which results were derived were liquidity, fund size, expense ratio, profitability and investing styles. An evaluation of the 100 funds reveal that surviving the toughest of times may not mean the highest return in every single year, but it does mean earning a very impressive 21-year cumulative return over the period. Large cap funds on average had the highest returns of all the funds when considering investing style, representing 52% of the funds in the top 100 list. Capital Research and Management was the best bet for mutual fund companies, having eight funds in the top 100. The funds had significant cumulative returns with every fund category showing excellent returns. Selecting funds with an expense ratio ranging from 0.12 to 1.40 would be a good choice considering all the other characteristics as well. Funds with a three star rating or better should be considered as potential candidates for the investor’s portfolio. Overall, the results show that even when times become very difficult investing in diversified mutual funds can generate adequate returns if the investor will stay the course over the long term.