Chapter 1

Introductory Background, Research Design and Framework of the Study

1.1 Introduction
1.2 Statement of the Problems
1.3 Review of Literature
1.4 Research Gap
1.5 Scope of the Study
1.6 Objectives of the Study
1.7 Hypotheses of the Study
1.8 Methodology of the Study
1.9 Limitations of the Study
1.10 Expected Contribution of the Study
1.11 Conclusion
1.1 Introduction

Mutual Funds (MFs) play a vital role in resource mobilization and their efficient allocation in a developing economy like India. Mutual funds are financial intermediaries in the investment business. It mobilizes resources from the small investors. The mobilized funds are, thereafter, utilised to purchase the securities of companies and corporations. It is thus an institutional arrangement for resource mobilization from small, marginal and household sector investors. The mobilized funds are used to acquire shares and securities of reputed companies. The importance of mutual funds has increased manifold in the capital market, particularly after liberalization. It has helped in increasing the investor’s base.

In the 1992-93 budget, the finance minister’s proposal to allow setting up mutual funds in joint and private sectors has further accelerated the growth of mutual funds. Far reaching changes have taken place in our economic system since liberalization. India is now one of the fastest growing economies in the world with average GDP growth rate of eight percent annually. According to the latest World Bank data, India is now the twelfth largest economy of the world.

The savings and investment pattern in our country have undergone some significant changes since liberalization. Investors now have various avenues to invest their hard earned money. In this context, mutual funds appears the best investment avenue, where the money of the investors is professionally managed having lesser risks and good return. Due to this very fact mutual funds are popular avenues for investments for small investors. This very fact was highlighted by the then Finance Minister, T. T. Krishnamachary, when he introduced the UTI Bill in Parliament in
November 1963. He said “the unit trusts provide an opportunity for the middle and lower income groups to acquire without much difficulty property in the form of shares”\(^2\). Hence our economic policy makers were convinced that mutual funds could offer a safe conduit for household participation in equity market.

The process of liberalization initiated in 1991 to boost the ailing economy has brought in a lot of changes in various aspects of the financial market. This had a positive impact in all sphere, increasing the saving rate to 23 percent in the last few years one of the highest in the world. The performance of the stock market has been tremendous and has become one of the largest markets in the world in terms of capitalisation. All these factors directly or indirectly have led to the tremendous growth of Indian mutual fund industry. People willing to earn higher rate of return by taking minimal risks are finding Mutual Funds (MFs) a good avenue to invest their savings.

Mutual funds have shown consistency in its performance and for the past eight years or so, the Indian MFs industry has registered a growth rate of around 16.68% and it is expected to continue in future. With the entrance of new fund houses and the introduction of new funds into the market, investors are now being presented with a broad array of fund choices. Fund houses with the better known brand equity are sure to capture the biggest spending investors. The present study therefore aims to find out the how liberalization has helped the industry to flourish and how HDFC mutual fund, a private sector mutual fund has performed on various counts, to asses the advantages of investment in mutual funds in comparison to other available option of investment.
1.2 Statement of the Problems

The Indian mutual funds industry is going through a phase of transformation since liberalization. Liberalization has paved the way for foreign investors in the mutual fund industry. This has increased the pace of evolution in the industry and made more products and services available to investors. Institutional investors dominate the mutual fund industry. They hold about 57 percent the total net assets whereas, retail investors account for about 37 percent.

Thus the present study is an endeavour to study the impact of liberalization on the mutual fund industry, how the financial sector reforms necessitated due to liberalization, have led to growth and development of the Indian mutual fund industry. The study also attempts to find out the performance of select mutual funds schemes of HDFC mutual funds in the changed environment. Their performance in comparison to S&P CNX Nifty Index and 91-Day Treasury bill used as surrogate for risk-free rate of return. The following paragraphs present review of literature.

1.3 Review of Literature

Various aspects of mutual fund have been studied by the researcher in the following section.

(Kelly and Others, 2009), In their study “A Case Study of Ethics and Mutual Funds Mismanagement at Putnam”, examines the failure of top management at Putnam to exercise ethical behaviour in the face of their clear knowledge of corruption in the company. Market timing by employees was expressly forbidden by Putnam. In spite of this six employees, including two portfolio managers, were repeatedly engaged in market timing activities.
from 1998 to 2003, garnered over a million dollars in personal profit. The study found that CEO and key senior executives had factual knowledge of the abuses but the management failed to stop the abuses or to discipline those involved until faced with charges from government regulators. By failing to do so, top management breached ethical duties to its shareholders and inflicted serious damage to the organization. The end results of top management’s failure to address ethical violations were significant outflow of assets from Putnam’s funds, payment of penalties, and loss of trust among investors. The author raised concern about ethical issues surrounding mutual fund trading practices and the impact that top management can have on the ethical behaviour of employees\(^3\).

*(Das and Others, 2008)*, on the basis of their study “*Mutual Fund vs. Life Insurance: Behavioural Analysis of Retail Investors*”, found that that the post 1990 period, the service sector in most of the Asian economies witnessed growth fuelled by significant changes in their financial sector. They analyzed the role of Indian insurance and mutual fund industry in financial market. To understand the retail investors’ behaviour towards different savings avenues on the basis of their age, gender, education and profession. The study identified the features the retail investors look for in investment products like the investor’s preference for fund/scheme selection. They also identified the source of information that influences the fund/scheme selection decision and tried to find out the behavioural pattern of retail investors towards two important investment opportunities, i.e., mutual fund and life insurance\(^4\).

*(Tripathy, 2007)*, in her book, “*Mutual Funds in India emerging Issues*”, discussed about the basic concepts of mutual fund, operational policies,
practices, investment in securities, some aspects of portfolio management, selection, mutual fund marketing, and detailed analysis of the latest developments in mutual fund industries. Apart from this, she also emphasize on the fundamentals of research with details of statistical tools required for analysis in research work and discussed in detail about the current status of development and future prospects of mutual fund industry in India.

(Agrawal and Gupta, 2007), “Performance of Mutual funds in India: An Empirical study”, evaluated the performance of mutual funds operation in India. To carry out their empirical work, the quarterly return of all equity diversified mutual funds return for the period January 2002 to December 2006 was tested. Analysis was carried out with the help of Capital Asset Pricing Model (CAPM) and Fama-French Model. On the basis of their study they suggest that mutual funds actually added value and investing in them was worthwhile for investors. However, application of Fama-French model opposes this. This model, which predicates returns on excess market returns, size factor, and value factor, suggests that returns earned by mutual funds were actually due to exposure to these factors only and the fund managers did not add any value. Moreover, the only factor that seems to impact mutual fund returns is the excess market returns; size and value factors when taken along with excess market returns do not hold any significance. In contrast, both size and value factors when taken individually with excess market returns show that they have significant impact on returns.

(Sujatha, 2007), in her article “Real Estate Mutual Funds in India”, discussed the SEBI guidelines for Real Estate Mutual Funds (REMFs) with regard to investment criteria, regulatory safeguards and structure of the REMFs. The
author also tried to find out the evolution of REMFs in India and highlights the pros and cons of investing in these funds. The study explored the impact of these funds on the growth of real estate industry in India and highlighted the importance of REMFs in the growing real estate industry.

(Rao and Mishra, 2007), in their article “MFs Industry in India“, discussed how in recent times, the Indian Mutual Fund Industry has witnessed several structural and regulatory reforms. The reforms were intended with the objective of facilitating investors in investing in mutual funds, making their investment more safer and yielding higher return. They also discussed how the regulatory framework were introduced for gold traded funds and the government relaxing norms for Foreign Direct Investments in real estate ventures. They also discussed all important changes that have taken place in the mutual funds industry in recent years. They have carried out a comprehensive study of various changes that has taken place in the mutual funds industry to facilitate investment and protect investor rights.

(Verma, 2007), in his study “Needs of a Healthy Investment Portfolio with Special Reference to Hybrid Funds“, analyzed the Hybrid Funds, their advantages, and future prospects in India. He also makes a microscopic study of various investment avenues, the risk involved and the return generated. He also has a look at investment styles and objectives of hybrid funds and concluded that the Hybrid Equity-oriented Fund over shadowed the Sensex by giving returns of 16.25% compared to 10.96% of Sensex over a one-year time period as on May 6, 2005.
(Shukla, 2006), in his study “Mutual fund purchases by high net worth individuals in India”, observed that Indian MFs industry is dominated by institutional investors who hold about 65% of the Indian mutual fund assets, whereas retail investors account for only 1.3 percent. In the last decade, High Net worth Individuals (HNWIs) have emerged as prominent players in the MF segment. The study aims to identify factors that drive Indian HNWIs to invest in Mutual Funds 10.

(Verma, 2006), On the basis of his study “Can AMCs Sustain Their Big Gains”, tried to find out the underlying reason for the growth of mutual funds industry in India and also the factors that could affect the growth of Asset Management Companies. On the basis of his study he deduced that AMCs need to focus on the investor’s financial desires and keeping their growth track intact. They need to understand the kind of the schemes desired by the investors so that they are able to get the share of the funds that are lying in other investment avenues 11.

(Mendali, 2006), in his study “Mutual Funds Regulations”, discussed how the regulatory environment in India acted as a forerunner for the overall growth and stability of the capital market. For smooth functioning, better efficiency, transparency and investor affability, the Government issues a certain set of guidelines for the mutual funds industry. He also discusses the role of Securities and Exchange Board of India (SEBI), the statutory legal body that issues the authorization to mutual funds to do business and how the role of SEBI, has been exemplary in controlling fraudulent practices. He also emphasized the AMFI role in this context 12.
(Mohan, 2006), in his study “Mutual fund industry in India: development and growth”, analyzed how the Indian mutual fund industry has become one of the fastest growing sectors in the Indian capital and financial markets. He also makes study of the various developments in mutual fund industry in India which has experienced dramatic improvements in quantity as well as quality of product and service offerings in recent years. He also makes study of Mutual funds assets under management which grew by 96% between the end of 1997 and June 2003 and as a result it rose from 8% of GDP to 15%. On the basis of his study he infers that the industry has grown in size and manages total assets of more than $30351 million. He also draws attention towards the fact that the private sector accounts for nearly 91% of the resources mobilized showing their overwhelming dominance in the market while the Individuals constitute 98.04% of the total number of investors and contribute US $12062 million, which is 55.16% of the net assets under management.

(Sondhi and Jain, 2005), in their work “Financial Management of Private and Public Equity Mutual Funds in India: An Analysis of Profitability”, examined the rates of returns generated by equity mutual funds, vis-à-vis, 364 days T-bills and the Bombay Stock Exchange-100 (BSE-100) National Index during the period 1993-2002. For this they took sample of 36 equity mutual funds from 21 asset management companies belonging to private and public sectors. On the basis of their study they found that only one-fourths of the equity mutual funds were able to generate superior returns than the risk-free return (on T-bills). Lower average monthly fund return of 0.44 percent as compared to risk-free return on T-bills (0.80%) and lower median monthly return of 0.31 % by these mutual funds as compared to
0.81 percent of T-bills support their above findings that mutual funds have failed to earn returns in excess of risk-free returns. They also found that mutual funds did not show consistent performance as less than one-tenth of the funds only could earn higher returns than the T-bills during both the phases. However their findings when compared with the market portfolio (BSE-100index) displays different picture. On the basis of the data it is evident that overall performances of equity mutual funds (mean monthly return of 0.44%) have been far superior to the market portfolio return (mean monthly return of 0.14%). In numbers, majority of the funds or nearly two-thirds of the sample funds (61%) have outperformed market portfolio returns during the aggregative period, 1993-02. Hence on the basis of their study they concluded that private sector sponsored mutual funds have been able to earn returns much higher than the market returns. They believe that this is due to better stock selection and timing skill of private sector mutual funds manager. They by employing better management practices have been able to out perform the public sector mutual funds\textsuperscript{14}.

\textbf{(Tripathy, 2004), in her study “An Empirical Analysis on Performance Evaluation of Mutual Funds in India: A Study on Equity Linked Savings Schemes”, evaluated the performance of 31 tax planning schemes in India over the period 1994-95 to 2001-2002. To carry out the study she examined the investment performance of Indian mutual funds in terms of six performance measures. She concluded that the fund managers under study have not been successful in reaping returns in excess of the market or in ensuring an efficient diversification of portfolio. This was evident from the fact that only one scheme showed linear relationship to return
and risk and while others failed to do so. This was attributed to fund manager’s acumen of selectivity and poor investment planning of the Fund 15.

(Chander and Singh, 2004), in their work “Performance of Mutual Funds in India An Empirical Evidence”, studied the performance of selected schemes of mutual funds based on risk-return relationship. For the purpose, they used the time-tested models of mutual funds performance evaluation given by Sharpe (1966), Treynor (1965) and Jensen (1968). In all, 23 growth schemes floated by five mutual funds viz; Alliance Capital, Prudential ICICI, Pioneer ITI, UTI and Templeton India fund was taken for study. The data relates to the period since inception date of a particular scheme till March 31, 2001. They analysed the data on the basis of coefficient of determination, diversifiable risk, beta risk, mean return in addition to Sharpe ratio, Treynor ratio and Jensen’s alpha and concluded that the performance of mutual funds schemes was not so bad as compared to market performance over the given period as has been the generalized allegation. They also found that schemes floated by Alliance Capital, Prudential ICICI and, to some extent, Pioneer ITI have earned better than the market whereas UTI and Templeton India have not performed well as compared to the market16.

(Sengupta, 2003), in his study “Efficiency test for mutual funds Portfolio”, developed a set of nonparametric tests which includes the convex hull method and the stochastic dominance criteria for evaluating the performance of mutual fund portfolios. On the basis of empirical results it is evident that some groups of funds based on new technology tend to outperform the others and in most cases the investor shows a preference
for skewness, thus emphasizing an asymmetry in the mean variance relationship. Technology funds tend to exhibit second order stochastic dominance over the income and growth funds. This shows some new features of the mean variance efficiency frontier 17.

(Sadhak, 2003), “Mutual Funds in India Marketing Strategies and Investment practices”, discussed that the mutual funds industry is still nascent stage in India, but has assumed considerable significance in the post-liberalized market economy. He critically examines the recent growth and performance of mutual funds in India, while identifying the constraints in their development. He addresses the major structural, regulatory and operational issues pertaining to Indian mutual funds, keeping in mind the changing perceptions of investors and the emerging market structure. Considering the growing globalization of Indian financial markets and their integration with world markets, he also outlines the conceptual framework and established operational practices of mutual funds in developed countries such as the USA, UK and Japan. In the process, he provides valuable data relating to mutual funds in these countries and in India. Overall, the book focuses on strategic directions for mutual funds with regard to marketing and investment to enable them to cope with the emerging challenges in the fast-changing savings and capital markets in India 18.

(Singh, 2003), in his book “Mutual Funds in India” covered all aspects of mutual funds like theoretical aspects regulatory frame work of mutual funds in India and mutual funds organised by banks and private sector. He has made a comparative analysis of performance of various mutual funds in order to provide better insight about the working of mutual
funds and also given various suggestions for the improvement of mutual funds industry in India 19.

(Borensztein and Gelos, 2003), in their article, “A Panic-Prone Pack? The Behaviour of Emerging Market Mutual Funds”, explored the behaviour of emerging market mutual funds using a novel data base covering the holdings of individual funds over the period January 1996 to December 2000. On the basis of their findings they deduced that the degree of herding among funds is statistically significant, but moderate. Herding is more widespread among open-ended funds than among closed-ended funds, but not more prevalent during crises than during tranquil times. They also found some evidence that funds tend to follow momentum strategies, selling past losers and buying past winners. The study observed that degree of herding and momentum trading is not enough to account for the large observed volatility on international capital markets 20.

(Chander, 2002), in his book “Performance Appraisals of Mutual Funds in India”, examined the risk –return of mutual funds with a view to investigate mutual funds performance in terms of theoretical performance evaluation model developed by Sharpe, Treynor and Jensen. In his study he also made a comprehensive decomposition of portfolio performance to attribute it to various activities of fund manager such as stock selectivity, market timing risk bearing and diversification. In addition the author also examines the contemporary portfolio management practices with regard to portfolio construction, portfolio management, portfolio performance evaluation, and investor service and disclosure practices 21.

(Gupta, 2000) in his article “Investment Performance of Indian Mutual Funds: An Empirical Study”, has examined the investment performance of Indian
mutual funds in terms of six performance measures, using weekly NAV data for 73 mutual fund schemes from 1994 to 1999. On the basis of his study he found that the schemes selected for the study could not perform better than the market\textsuperscript{22}.

\textbf{(Singla and Singh, 2000),} in their study “\textit{Evaluation of Performance of Mutual Funds Using Risk-return Relationship Model}”, evaluated performance of mutual funds using risk-return relationship models given by Sharpe, Treynor and Jensen. On the basis of their study they found that the performance of the 12 growth oriented schemes was inferior compared to that of market return. Sharpe’s ratio shows that mutual funds have performed poorly with regard to return on investment as compared to market. Treynor measure calculated showed investors did not earn adequate returns per unit of systematic risk undertaken. Also, Jensen measure calculated indicated that on an average fund earned about 0.2\% less per month given their level of systematic risk. The negative value of alpha is indicative of the fact the schemes could not earn enough to recover various expenses involved in operation\textsuperscript{23}.

\textbf{(Sethu, 1999),} conducted a study “\textit{The Mutual Fund Puzzle}”, to establish whether the fund portfolios are adequately diversified, do they give excess returns after adjusting for systematic risk; and do the portfolios show market timing. For this the author selected 18 open-ended growth schemes. On examining 18 open-ended growth schemes for the period March 1985-July 1999 the percentage of beta risk (73.38 to 44.43) and percentage diversifiable risk (55.57 to 26.62) indicated poor diversification. The excess return earned by the funds is statistically insignificant. Majority of the funds showed negative returns. However, some funds showed
excess positive returns. No fund exhibited any ability to time the market. Hence, these findings negate the claims by mutual fund managers that they can sight and exploit investment opportunities better than a naïve investor. An investor who invests in a basket of risk-free securities and an equity index can match the fund’s return performance and can beat the fund’s diversification performance.

(Graves, 1998), in his article “The Geography of Mutual Fund Assets”, examined the spatial aspects of mutual fund investments. He discusses the characteristics of the mutual fund industry and compares them to other financial industries. He used previous studies of the financial industry and quaternary location theory to find out whether mutual funds assets are concentrated in large urban centers. Mutual fund assets may increasingly concentrated in financial centers over the 1986-1996 period; and the distribution of mutual fund assets may be similar to the distribution of other financial activities. Examination of mutual fund asset data from 1986 and 1996 did not fully support any of the three hypotheses. These findings suggest that the standard elements of quaternary location theory may need to be re-evaluated.

(Gupta and Sehgal, 1998), “Investment Performance of Mutual Funds: The Indian Experience,” conducted a study to evaluate investment performance of mutual funds to find out the following: a) fund diversification b) consistency of performance c) consistency between risk measures and fund objectives and d) risk-return relationship in general. They found that income - growth scheme were best performer. To find out the diversification they used (R)^2 value. Low value of (R)^2 indicates very low diversification. Results showed that out of sample of 80 schemes, income-
growth schemes were the best performers. As regards diversification, very low coefficient highlights lack of diversification. Regarding consistency of fund performance, Pearson’s product moment correlation coefficient indicates no consistent performance from year to year. However, income-growth scheme of few funds showed consistent performance outperforming the market index. Regarding consistency between measures and fund objectives, the relationship between fund objectives and systematic risk (betas) is inconsistent with expectations. The low and even negative values show that the fund managers are not managing their fund portfolios well as per the desired risk levels. Finally for risk-return relationship, the results support the relationship for the Indian market with standard deviation as measure of risk. However this value is not consistent with the CAPM framework which predicts a relationship between performance and systematic risk.26

(Ramachandran,1997), in his work “Pitfalls in Portfolio Performance Measures and their Implications to Mutual Fund Industry “, found that imperfection in the market coupled with the outside influence have made return on investment less reliable in India. On the basis of his study, he rejects CAPM under predictive and non-predictive forms. So, he concluded that median of returns and mean absolute deviation of returns might be considered as an alternative to mean and standard deviation of returns, while evaluating mutual fund schemes risk adjusted performance meaningfully wherever normality is violated with high peakedness and long tails. He concluded that when these two methods are applied individually for ranking mutual funds schemes there is a big difference in the two results of performance measure.27
(Murthi, Choi and Desai, 1997) in their work “Efficiency of Mutual Funds and Portfolio Performance Measurement: A Non-parametric Approach”, proposed a new index to measure portfolio performance named as Data Envelopment Portfolio Efficiency Index (DPEI). It is an extension of operations research technique of data envelopment analysis identified as a relative measure of performance that does not require the specification of a benchmark and also incorporates transaction cost. For the purpose, 731 mutual funds were put into seven categories as: Aggressive growth, asset allocation, equity-income, growth, growth-income, balanced and income fund. Findings showed that managers in aggressive growth, asset allocation, and income and equity-income funds are relatively more efficient in utilizing resources while growth, balanced and growth-income funds show a lower efficiency index. As regards the relationship between performance and transaction costs, the findings were that mean efficiency scores were not related to mean expense ratios, mean loads or mean turnover implying thereby that higher transaction costs are not correlated with better efficiency scores (DPEI). Lastly, regarding effect of size of fund on performance, the correlation between the mean DPEI for each category and mean Net Asset Value (NAV) suggested that efficiency is not related to the size of the fund. 28

(Sehgal, 1997), “An Empirical Testing of Three-parameter Capital Asset Pricing Model in India”, empirically tested three-parameter Capital Asset Pricing Model in Indian capital market by taking monthly rates of return (adjusted for bonus, stock splits and right issues) for 80 securities included in BSE National index. The evidence indicated that CAPM is not a suitable descriptor of asset pricing on the Indian capital market for the period of
Introductory Background, Research Design and Framework of the Study

the study. Slope was found negative but insignificant for the total period, implying absence of any significant relationship between β and average return. 29

(Thiripalraju and Patil, 1997), “Micro and Macro Forecasting Abilities of Indian Fund Managers” made a study from 1994 to 1999. He on the basis of his study found that none of the schemes selected for study could earn more than the market rate of return. He also highlighted the fact that portfolio manager were unable to book profit during the market boom this he attributed to due to lack of knowledge about the market, the manager could not reap benefit of investment during favourable conditions. 30

(Rao and Venkateswarlu, 1997), “Performance Evaluation of Mutual Funds” A case study of Unit Trust of India”, found that the performance of UTI schemes were not superior that of the market and only few schemes were able to outperform the market. 31

(Madhusoodanan , 1996), “Risk and Return: A New Look at the Indian Stock Market” conducted a study to find out the relationship between the expected return and risk by using portfolio method rather than the individual security approach. For this purpose, portfolios were formed to test their performance. Results indicated that the risk and expected return in the Indian market are not necessarily positively related. In Indian market, the investor rationality and risk aversion do not appear to be important. It is found that higher risk is not priced and investing in higher risky securities with the expectation of high returns in future may not produce good results. In case of yearly test periods, as against quarterly ones, the securities, which had produced high returns in the past, did not perform well in the next period. Hence, the policy of selling prior winners
and purchasing prior losers could produce excellent results over one year investment horizon 32.

(Chordia, 1996), “The Structure of Mutual Fund Charges” provided an explanation for diversity in investment strategies and fees of open – end mutual funds. It sought to dissuade redemption through front – end and back – end load feed. The empirical evidence was found consistent with model predictions that such fees dissuade redemptions in open – end funds, and that fund held more cash when there was uncertainty about redemptions 33.

(Lockwood, 1996), “Macroeconomic Forces and Mutual Fund Betas” developed a model in which fund beta were linearly related to changes in macroeconomic factor using monthly returns. Author selected 171 mutual funds over a period of 1978-91. On the basis of his study he concluded that there was negative relationship between equity funds, beta and inflation changes and default risk premium 34.

(Panigrahi, 1996), “Mutual Funds: Growth, Performance and Prospects” examines the impact of capital market reforms on mutual funds. He found that there has been shift in focus from individual investors to institutional investors. The investible resources of mutual funds have increased manifold mainly due to economic reforms and liberalisation35.

(Bekaert and Urias, 1996), “Diversification, Integration and Emerging Market Closed-End Funds” they studied a new class of unconditional and conditional mean-variance spanning tests that exploits the duality between Hansen-Jagannathan bounds (1991) and mean- standard deviation frontiers. They used it to examine the diversification benefits from emerging equity markets using an extensive new data set on U.S. and
U.K.-traded closed-ended funds. In their study they found significant diversification benefits for the U.K. country funds, but not for the U.S. funds. They relate this difference to portfolio holdings rather than to the behaviour of premiums in the United States versus the United Kingdom. They concluded that emerging market funds provide statistically significant diversification gains in unconditional tests, while comparable U.S. funds do not.³⁶

(Tripathy, 1996), “Innovative Growth Oriented Mutual Funds” has evaluated the performance of growth oriented schemes by using CAPM model and Jensen, Treynor, Sharpe measures and concluded that performance of the scheme depends upon the performance of mutual funds. The fund may produce returns either above or below average, but it may be superior over the long run. Again in her further study (1998), she concluded that it is imperative that appropriate measures are taken to boost the mutual funds industry as they are important for the growth and development of capital market and spreading equity culture.³⁷

(Yadav and Mishra, 1996), “Performance Evaluation of Mutual Funds : An Empirical Analysis” have evaluated performance of 14 mutual fund schemes using monthly data. They used three risk-adjusted performance measures namely Sharpe Index, Treynor Index and Jensen measure. On the study concluded that the funds as a whole performed well in terms of non-risk-adjusted measure of average returns .He also deduced that fund manager adopting a conservative investment policy and maintained a low profile beta.³⁸

(Kaura and Jaydev, 1995), “Performance of Growth Oriented Mutual Funds: An Evaluation” evaluated the performance of five growth oriented
schemes in the year 1993-94, by employing Sharpe, treynor and Jensen measure. On the basis of their study they concluded that Master gain 91, Canbonus and Indsagar have performed better than the market in terms of systematic but not in terms of total risk 39.

(Sarkar and Majumdar, 1994), “Performance Evaluation of Mutual Funds in India”, evaluated the performance of five growth oriented schemes for the period February 1991 to August 1993. They used CAPM and Jensen measures to evaluate the performance. They conclude that the selected mutual fund schemes have not offered superior returns during the study period than the market in general 40.

(Shah and Thomas, 1994), “Performance in Evaluation of Professional Portfolio Management in India” studied the performance evaluation of 11 mutual fund schemes and concluded that except one scheme other schemes earned inferior returns than the market in general 41.

(Bhosale and Adhikary, 1994), “Risk-Return Analysis of Mutual Fund Growth Scheme”, evaluated the performance of growth schemes using Sharpe, Treynor, Jensen and Fama’s measures. They used Fama’s measure for identifying returns due to diversification and systematic risk 42.

(Shukla and Singh, 1994), in their study, “Are CFA Charter- holders better equity fund Managers”, found that professionally qualified fund managers were better performer than those who were not professionally educated. They also found that portfolios constructed by professionally educated people were riskier but better diversified thus minimising risk and maximising return 43.
(Ansari, 1993), “Mutual Funds in India: Emerging Trends”, highlighted the importance of mutual funds industry in the Indian financial system. For its overall growth and development, he advocated setting up of regulatory body to regulate mutual fund operation in India.

(Gangadhar, 1992), “The Changing Pattern of Mutual Funds in India”, on the basis of his study concluded that due to liberalisation the Indian capital market had experienced structural changes and unprecedented growth. He observed that all these will provide new avenues conducive for floating mutual funds.

(Angel, 1992), in his paper “Role of Self-Regulatory Organisation in Mutual Fund Industry in India”, advocated setting up of regulatory framework for the oversight of mutual funds industry in India. According to him this was necessary as paradigm changes had taken place in the financial sector due to liberalisation.

(Sarkar, 1992), “Should we invest in Mutual Funds”, made a comparative study of investment in mutual funds with that of other security alternatives. He on the basis of his study concluded that mutual funds are the best avenue for investment for those who are ready to bear risk in the hope of getting superior return.

(Sarkar, 1991), “Performance Evaluation of Mutual Funds”, pointed out in his study that the methodology adopted by Sharpe (1996) and Trenyor (1968) to rank the performance of mutual funds were similar in nature. Though the methodology adopted by them were different.

approach. They used ET Index as a proxy for market behaviour. The risk adjusted performance was evaluated by using Sharpe, Jensen and Treynor measures. They concluded that the fund performed better than the market, but the fund did not do well when compared to Capital Market Line (CML) \(^49\).

\textbf{(Guy, 1978), “The Performance of the British Investment Trust Industry”}, used the Sharpe and Jensen measure to evaluate the risk adjusted performance of UK investment trusts. For this they grouped forty - seven investment trusts into equal and value weighted portfolio with monthly price and investment return for the period 1960-70. Further he concluded that, no trusts had exhibited superior performance, compared to the London Stock Exchange \(^50\).

\textbf{(Kon and Jen, 1978), “The Investment Performance of Mutual Funds and Empirical Investigation of Timing selectivity and Market Efficiency”}, empirically estimated the level of systematic risk and performance of 49 mutual funds over the period of 1960-71. The results indicated that a very substantial fraction of mutual funds had two levels of systematic risks during each of the three sub- periods. The study demonstrated that no fund manager had the forecasting abilities \(^51\).

\textbf{(Norman, 1977), “Risk, The Pricing of Capital Assets and the evaluation of Investment portfolios: A comment”}, applied neutral risk adjusts performance measure and concludes that approximately sixty six percent of the funds (out of 75) had larger net returns adjusted for systematic risk \(^52\).

\textbf{(Klemkosky, 1977), “How Consistently Do Managers Manage”}, examined performance consistency of fund managers on the basis of results for 158 mutual funds for the period 1968-1975 by analyzing rank order of
performance over different two year and four year periods. On the basis of results, he concluded consistency in performance between four year periods, but relatively low consistency between adjacent two year periods\textsuperscript{53}.

\textbf{(McDonald, 1974), “Objectives and Performance of Mutual Funds, 1960-67”} examined the relationship between the stated fund objectives and their risks and return attributes. They conclude that there was positive relationship between stated objectives and risks\textsuperscript{54}.

\textbf{(Jensen, 1968), “The Performance of Mutual Funds in the period 1945-64"}, developed a composite portfolio evaluation technique that considered returns adjusted for risk difference and used it for evaluating 115 open-ended mutual funds during the period 1945-66. For the full period Jensen examined returns net of expenses and gross of expenses. The analysis of net return indicated that 89 funds had above average returns adjusted for risks, while 76 experienced abnormally poor return. On the basis of his analysis Jensen concluded that for the sample of 115 mutual funds, the fund manager were not able to forecast security prices well enough to recover research expenses and fees\textsuperscript{55}.

\textbf{(Sharpe, 1966),” Mutual Fund Performance"}, developed a composite measure to consider return and risk. Based on this he evaluated the performance of 34 open and mutual funds during the period 1944-63. He observed that 11 funds had outperformed the bench mark. Based on this evidence, Sharpe concluded that average mutual fund performance was inferior to an investment in stock market. An analysis of relationship between fund performance and its expense ratio indicated that good
performance was associated with low expense ratio. On the other hand, only a low relationship was discovered between size and performance.

1.4 Research Gap

From the foregoing comprehensive literature review related to mutual funds industry in India, it is evident that though few works has been done to find out the growth of mutual fund since the inception of UTI. But no detailed study has been undertaken to assess the impact of liberalization on the mutual funds industry in India. Also no empirical work has been done to find out performance evaluation of HDFC mutual funds schemes. Therefore, the present study has been done to find out the impact of liberalization on the net resource mobilized by mutual funds, its impact on house hold sector savings. Also an elaborate empirical work is carried out to assess the performance of HDFC mutual funds schemes in comparison to benchmark indices.

The present study differs from the earlier studies as it covers all aspects of mutual funds industry in India since 1993. The year 1993 is important as it was in this year that SEBI Mutual Funds regulation was enacted and also the private sector mutual funds were allowed to start operation in India. The study makes an attempt to trace the impact of liberalization on the Indian mutual fund industry. It also tries to find out the performance of HDFC mutual funds in comparison S & P CNX NIFTY index and their portfolio composition and diversification of each scheme.

1.5 Scope of the Study

The present study would cover period from 1981-2008, a period of 28 years to asses the growth and development of mutual funds industry in general and the impact of liberalization on net resource mobilization in
particular. The study also covers a period of eight years from Sep. 2000 to March 2008 for evaluating the investment performance of HDFC mutual funds schemes. The present study focuses mainly on the growth trend of Indian mutual funds schemes and household sector savings mobilization by the mutual funds in India. The S & P CNX NIFTY Index is used by the researcher to compare the performance of HDFC mutual funds schemes. The study has used the monthly yields on 91-day Treasury bills (T-bills) as a surrogate for the risk-free rate of return.

### 1.6 Objectives of the Study

Mutual funds industry has grown up by leaps and bounds since liberalization. Moreover the entry of private mutual funds (since 1993) has injected a sense of competition and the industry has been witnessing structural transformation from a public sector monopoly to monopolistic industry. Therefore to find out the growth and development of Indian mutual funds industry the present study has the following objectives:

1. To find out the impact of liberalization on the growth trend of the Indian mutual funds industry.

2. To evaluate the role of mutual funds in the mobilization of household sector savings.

3. To trace the recent issues and challenges of the Indian mutual funds industry.

4. To find out necessary facts related to selected HDFC mutual funds schemes which can benefit the investors and fund managers.

5. To evaluate the investment performance of selected mutual funds schemes in terms of risk and return.
6. To examine the funds sensitivity to the market fluctuations.
7. To appraise investment performance of mutual funds on risk adjusted the theoretical parameters as suggested by Sharpe, Treynor, Jensen and Famas.
8. And finally to come out with suggestions and recommendations for enhancing the growth of Indian mutual funds industry in general and HDFC mutual funds in particular.

1.7 Hypotheses of the Study

In order to fulfil and achieve the above stated objectives of the research the study has been made on the basis of certain hypothesis bifurcated according to the various dimensions of the Indian mutual funds industry. The hypotheses of the study have been made according to the need and importance of the study. The study has taken into consideration the growth and development of Indian mutual funds industry in toto and in term of net resource mobilization related to the Indian mutual funds industry, the performance evaluation of HDFC mutual fund schemes and its diversification as criteria for hypothesis. For testing purpose the following hypotheses have been formulated.

**Hypothesis 1**
The null hypothesis of the study assumes, H0 : There is no significant impact of policy reforms on net resource mobilized by mutual funds since 1993-94, while the alternate hypothesis of the study assumes, H1: there is a significant impact of policy reforms on net resource mobilized by mutual funds since 1993-94.
Hypothesis 2
H0: The investment performance of HDFC mutual funds schemes is not superior to the relevant benchmark portfolio, while the alternate hypothesis of the study assumes, H1: The investment performance of HDFC mutual funds schemes is superior to the relevant benchmark portfolio.

Hypothesis 3
H0: The schemes of HDFC mutual funds are not well diversified, while the alternate hypothesis of the study assumes, H1: The schemes of HDFC mutual funds are well diversified.

Hypothesis 4
H0: There is no relationship between HDFC mutual funds schemes investment objectives and their risk characteristic, while the alternate hypothesis of the study assumes, H1: There is a relationship between HDFC mutual funds schemes investment objectives and their risk characteristic.

1.8 Methodology of the Study
The study is an empirical work based on the secondary data and primary data collected from various sources for the fulfilment of truthfulness of the analysis and interpretation and then to ensure the quality of research study.

1.8.1 Collection of Data
a) Secondary Data
The secondary data for the study have been collected from various secondary sources of information such as published reports of AMFI, SEBI, RBI annual reports and bulletin. The annual reports of various
mutual funds and their monthly fact sheets have also been used. Other reports such as various reports from Ministry of Finance, Department of Company Affairs etc are also collected for supporting the literature references. Altogether relevant books, journals and periodicals, research papers, published thesis, articles, financial dailies, websites, are also consulted by the researcher for better referencing.

b) Primary Data

The primary source is the outcome of personal interviews with experts, fund manager, brokers and agents.

1.8.2 Analytical Tools

The statistical tools used for the analysis and interpretation are: Mean, variance, standard deviation and linear regression. Beside these the following six measures were used to evaluate performance:

(a) Rate of Return

(b) Sharpe Ratio

(c) Treynor Ratio

(d) Jensen Measure

(e) Sharpe Differential Measure

(f) Famas’ Composite of Investment Performance

Considering the technical nature of certain statistical tools and the frequent use of these tools in the study a brief discussion of some relevant tools are as follows:

1.8.3 Regression Technique

One of the techniques used in the statistical analysis is the regression technique. It assumes a functional relation between the dependent variable
and Independent variable(s). If there is only one independent variable then the technique relevant is known as simple regression and if there are many independent variables then it is known as multiple regressions. The title of the present research suggests that the variable like investment is the dependent variable, whereas there can be many independent variables like time and policies. (Also the other macro economic factors can be the independent variables) The single variable regression takes the linear form of functional relations like:

\[ Y = a + b \times X. \]

Where, \( Y \) is the dependent variable,

'\( X \)' is the independent variable,

'\( b \)' is the slope of the straight line

'a' is the \( Y \)-intercept.

In case of multiple regressions the functional relation takes the following formula

\[ Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + \ldots + b_n X_n. \]

Where, \( Y \) is the dependent variable \( X_1, X_2, X_3 \ldots X_n \) are the independent variables. \( b_1, b_2, b_3 \ldots \ldots \ldots \ldots b_n \) are the respective slope of the independent variables \( X_1, X_2, X_3 \ldots X_n \), and, 'a' is the \( Y \)-intercept.

In the present study on pattern and trends in mutual funds earnest attempt has been made to use the adequate statistical techniques. For the analysis of total trend in net resource mobilisation for the entire period of 28 years i.e. from 1981 to 2008, multiple regressions has been used between the dependent variable “net resource mobilisation” and independent variables “time” and “policy” which is assumed as dummy variables. (Dummy variables one and two)
The regression equation that:

\[ Y = \alpha + \beta t + \gamma d \]

Where \( \alpha, \beta \) and \( \gamma \) are constant and 't' = time and 'd'=dummy variable.

For measuring impact of policy reforms since 1993 dummy variables D has been used.

1.8.4 R-Squared

R-squared values range from 0 to 100. R-squared of 100 means that all movements of a security are completely explained by movements in the index. A high R-squared (between 85 and 100) indicates the fund's performance patterns have been in line with the index. A fund with a low R-squared (70 or less) doesn't act much like the index. A higher R-squared value will indicate a more useful beta figure. For example, if a fund has an R-squared value of close to 100 but has a beta below 1, it is most likely offering higher risk-adjusted returns. A low R-squared means you should ignore the beta.

1.8.5 Return

Return on a typical investment consists of two components. The basic component is the periodic cash receipts (or income) on the investment, either in the form of interest or dividends. The second component is the change in the price of the asset commonly called the capital gain or loss. This element of return is the difference between the purchase price and the price at which the asset can be or is sold; therefore, it can be a gain or a loss. In the first place, we have computed the monthly returns for each of the sample funds by using the following equation:
1.8.6 Portfolio Return

\[ R_{it} = \frac{\text{NAV}_t - \text{NAV}_{t-1}}{\text{NAV}_{t-1}} \]

Where \( R_{it} \), is difference between net asset values for two consecutive days divided by the NAV of preceding day. Similarly the market return has been computed using the following formulae.

Market Return:

\[ R_{mt} = \frac{\text{M. Ind}_t - \text{M. Ind}_{t-1}}{\text{M. Ind}_{t-1}} \]

Where \( R_{mt} \) is the difference between markets indexes of two consecutive days divided by market index for the preceding day.

1.8.7 Risk

Risk is neither good nor bad. Risk in holding securities is generally associated with the possibility that realized returns will be less than expected returns. The difference between the required rate of return on mutual fund investment and the risk free return is the risk premium.

1.8.8 Standard Deviation

It is a measure of variability which is used as the standard measure of the total risk of individual assets and the residual risk of portfolios of assets. There are two variants of standard deviation: population and sample. The sample standard deviation is used when working with historical returns, as they are deemed to be samples unless 100% of the data points are used in the calculation. The population standard deviation is only used when working with 100% of the data points. Daily NAVs from a fund's inception through the most recent trading day would be
considered to be a population. Monthly returns for the past ten years are a sample.

In simple words, the standard deviation is the absolute value of the average deviation of the data points from the mean. In mathematical terms, it is the square root of the sample variance and the sample variance is the sum of the squared deviations divided by the number of data points less one, \((n - 1)\). To compute the population variance, you would simply divide by \(n\) instead of \((n - 1)\) and the population standard deviation would be the square root of the population variance.

**1.8.9 Beta**

Beta measures the systematic risk and shows how prices of securities respond to the market forces. It is calculated by relating the return on a security with return for the market. By convention, market will have beta 1.0. Mutual fund is said to be volatile, more volatile or less volatile. If beta is greater than 1 the stock is said to be riskier than market. If beta is less than 1, the indication is that stock is less risky in comparison to market. If beta is zero then the risk is the same as that of the market. Negative beta is rare.

**1.8.10 Sharpe Ratio**

Sharpe’s reward to variability ratio measures the excess return per unit of total risk as measured by standard deviation. The Sharpe’s ratios for different mutual funds, as well as benchmark portfolios, have been computed by using the following equation:

\[
\text{Sharpe ratio} = \frac{(\bar{R}_p - \bar{R}_f)}{\sigma_p}
\]

\(\bar{R}_p = \text{Observed average fund return}\)
Introductory Background, Research Design and Framework of the Study

\[
\bar{R}_f = \text{Average risk free return}
\]

\[
\sigma_p = \text{Standard deviation of fund returns}
\]

If Sharpe ratio is greater than the benchmark comparison, the fund’s performance is superior over the market. If the Sharpe ratio is less than market return, the fund’s performance is not good as the market.

1.8.11 Treynor Ratio

The Treynor’s reward to volatility ratio measures the excess return per unit of market (systematic) risk. We calculate Treynor ratios for the sample funds by using:

\[
TI = (Rp - Rf)/ \beta_p
\]

\[TI = \text{Treynor’s ratio}\]

\[Rp = \text{Average return on fund p}\]

\[R_f = \text{Return on risk free asset}\]

\[\beta_p = \text{Sensitivity of fund return on market return}\]

It measures portfolio risk in terms of beta, which is the weighted average of individual security beats. The ratio is relevant to investors, for whom the fund represents only a fraction of their total assets. The higher the ratio better is the performance.

1.8.12 Jensen Differential Measure

Jensen attempts to construct a measure of absolute performance on a risk-adjusted basis that a definite standard against which performance of various funds can be measured. This standard is based on CAPM measures the portfolio manager’s predictive ability to achieve higher return than expected for the given riskiness. The basic model is
Rpt - Rf = α + β (Rm - Rf) + ei

Where Alpha (α) = the intercept
βp = Systemic risk
Rm = Market return
Rpt = Fund return on time period t
Rf = Return on risk free asset

A positive value of Alpha for a portfolio would indicate that the portfolio has an average return greater than the benchmark return indicating the superior performance. Alternatively, a negative value of alpha would indicate that the fund has a return less than the benchmark.

1.8.13 Sharpe Differential Return Measure

Sharpe has applied this measure to know the incremental returns earned by the mutual fund manager for the given level of risk. The Sharpe differential return is computed by using the following equation:

Rpt - Rft = α + β [Rmt - Rft] + Σpt

Rpt = Return for the portfolio
Rft = Risk - free return
Rmt = Return on the market portfolio
Σpt = Random error term, and α and β are parameters of the model

The Sharpe measure is based on the Capital Market Line (CML). One of the major characteristics of CML is that only efficient portfolio can be plotted here. So it is assumed that, a managed portfolio (mutual fund scheme) is an efficient portfolio. In terms of CML, the risk premium
expected to be earned by the portfolio is in relation to the total risk of the portfolio rather than the systematic risk. Thus, the differential return will be the difference between the actual average return of the fund and its expected return for the given level of risk. If a portfolio is well diversified, the two measures (Jensen and Sharpe) should indicate same level of differential return. If the portfolio is imperfectly diversified, the Sharpe differential return will be smaller. The differential return will be the difference between the actual average return of the mutual fund scheme and its expected return for the given level of risk. Sharpe measure therefore takes into consideration not only the manager’s stock selection ability but also his ability to provide diversification. A comparison of Sharpe’s differential returns and Jensen’s alpha reveals the impact of selectivity and diversification on the fund returns.

1.8.14 Fama’s Components of Investment Performance

The performance of the funds is also examined in terms of Fama’s Components of Investment Performance Measure. In terms of Fama’s framework, portfolio return constitutes the following four components: (a) Risk-free return, (b) compensation for systematic risk, (c) compensation for diversification and (d) net selectivity. The different components have been worked out using the following:

Risk – free return: Given

Compensation for systematic risk: \[ \beta \ (R_m - R_f) \],

Compensation for diversification: \[ R_m - R_f \ [\sigma_p / \sigma_m - \beta] \],

Net Selectivity: \[ R_p - R_f - \sigma_p / \sigma_m [R_m - R_f] \]
The rationale for using this measure is that, the difference between return on an active bet and return on a passive bet, which is obtained from the security market line, may arise due to selectivity skills of fund managers. This difference is analogous to Jensen’s alpha. Fama developed a methodology that helps us to decompose selectivity skills into diversification return and net selectivity. The former is nothing but a compensation for diversifiable risk to which the active bet is exposed, while the latter reflects the true stock selection ability of the fund managers. A positive net selectivity indicates superior performance for a fund. However, in case of well diversified funds, both the net selectivity and selectivity are not likely to be significantly different from each other.

1.9 Limitations of the Study

1.9.1 Data limitations

All the sources, from where the data of the present study has been extracted do not provide the complete data, often data available is only for the recent two or three years, not enough for analysis. A few private corporate bodies are providing data but getting those data is also very difficult and often they charge exorbitantly in their coverage.

1.9.2 Sampling Errors

The study is mainly based on secondary sources of the primary surveys conducted by AMFI and SEBI therefore error of primary surveys bound to be occurred.

1.9.3 Impact of Time

The study on impact of policy measures on the growth and development of AMFI can not be seen in a short span of time where the reforms are an ongoing process.
1.9.4 Frequent Changes

The world is very fast and changes are happening frequently due to the globalization and liberalization. The researcher may not be able to consider all the changes and therefore there will be a gap of time span for further studies in future. However, the researcher is of strong opinion, that the result of the study in no way would be affected.

1.10 Expected Contribution of the Study

The study is an empirical work based on primary and secondary sources of information. The study would merely not be for the fulfilment of the requirement of the academic degree but also it is a part of my social commitment to bring out the facts and realities of the positive policy packages of liberalization for the promotion of mutual funds industry in India and its influence on Indian economy as a whole. The present study also makes an attempt to suggest for further reforms for enhancement mutual funds industry in India. It also suggests measures for the diversification of portfolio and optimising return on investment.

1.11 Conclusion

This chapter has dealt with the comprehensive review of literature, research gap, scope and importance of the study. The chapter also takes into consideration the hypotheses and statistical tools for analysis and interpretations. Limitations of the study have also been mentioned. The succeeding chapter would deals with conceptual review of mutual funds.
References


