CHAPTER I
INTRODUCTION

India is listed as one of the top emerging markets by the global players for investment purposes and it is being called as the fundamentally strong emerging market by many of the top most performing investment institutions such as Morgan Stanley, Fidelity fund, Morning star, Kemper fund etc. Investment in securities such as shares, debentures, mutual funds has been getting acceptance in India. The stock market boom and bust which had happened during early 1992 made almost every Indian a stock literate. And shortly after bust of the bubble people have started looking up towards the Indian stock market. Then came the scrapping of Capital Issues Control Act, Liberalisation of our economy etc. Indian capital market has become a place for global players. As a result of the changes that had taken place in the Indian economy after liberalisation, privatisation and Globalisation (L.P.G), the capital markets have undergone a metamorphosis to emerge as a major spectrum in the Indian financial system. In this context it is worthwhile to mention the size and status of the stockmarket. At present there are 7500 listed companies, 45 million strong investors, 23 stock exchanges and 250 Foreign Institutional Investors.

In the early 90’s investment in shares has been a favoured investment avenue available for the investing community. Owing to this fact, the Indian capital market has registered an impressive growth and hence the stockmarket gained the confidence of the investors. The year 1992-93 marked the turning point in the history of Indian capital market. Due to phenomenal increase in the domestic savings, improvement in deployment of investment through vibrant capital market, and the ill-effects of stock-scam made the investors to search for a new investment avenue where they can
minimise the risk for a reasonable return. Thus mutual fund industry gained its significance.

The avenues of corporate investment such as ownership securities, creditorship securities, mutual funds etc. have their own characteristics. Investment in stockmarket securities needs more involvement in risk bearing with an exception to mutual funds, which offer steady return and capital appreciation with a minimum of risk. It is a known fact that mutual fund operates in a highly competitive environment. A mutual fund operates as a financial intermediary. It sells its units to the public and invests the proceeds in a large number of market securities. The major role of a mutual fund is to reduce risk through diversification and to provide the ordinary investor with expert selection and professional monitoring of investments backed by excellent customer service. A mutual fund is a collection of stock, bonds and other securities purchased by a group of investors, managed by a professional investment company. It pools all the resources of unit holders and invests on their behalf in diversified securities in the capital market for attaining the desired objectives.

In developed countries, approximately 80 per cent of savings go into mutual funds and 20 per cent in bank deposits. But it is not so in the case of India. Prior to 1995, the only route through which mutual funds could mobilise money was Debt funds. But now, however, the scene is completely different. The small investors are increasingly eyeing on the equity funds. Mutual funds are also responding by offering a gamut of products to cater to the changing needs of the investors. This trend would accelerate, as fund managers deliver performance and more investors taste the benefit of convenience offered by the funds. As the economic outlook improves, investor
confidence will improve for the better. This will indirectly make the mutual fund industry to flourish.

During the year 2000, the Investment in mutual fund schemes are expected to see a phenomenal growth exceeding 25 to 30 per cent as the retail investor is again evincing interest in mutual funds and equity related schemes. Retail investors are gradually beginning to understand the concept of a mutual fund and its importance as an investment avenue. Still, they must understand the risk-reward relationship while investing in mutual funds. The investor has to bear in mind the fact that the risk-reward relationship differs between schemes. The successful launch of growth schemes in the last six months is an evidence of the current fiscal 1999-2000 for the change that is taking place in investor perception. A major contributing factor has been the performance of the funds themselves. Over the last two years, fund managers have been discreetly restructuring their portfolios with a near 100 per cent turnover, as a result of which 80 per cent of equity funds have outperformed the market indices. Investor confidence in the industry has been reinforced by the increased disclosures and adequate transparency of the funds, Improved accounting standards and valuations, quarterly disclosures including complete portfolio publication and regulations such as those that restrict private placements and investments in-group companies, have all contributed to this change. Due to competition and the entry of foreign players, the investor now has a variety of innovative schemes to choose from. Awareness has also grown among the investing public as a result of the investor and agent education programmes carried out by the various players from time to time.
Marketing has emerged as a specialised skill. World-over, mutual funds are not sold but bought. There are banks who sell mutual funds as part of their personal banking products, finance companies selling a whole range of financial products and there are broker intermediaries who market mutual funds, not as a product but as a concept.

The mutual fund industry will grow at least fourfold in terms of asset size in the next five years. However in order to survive in this fiercely competitive environment, asset management companies will have to come out with customized products to cater to varying investor needs. Currently, the size of the Indian mutual fund industry is about Rs 1,00,000 crore\(^1\) which is one Seventh of the size of total bank deposits. The industry standards have been consistently improving over the last few years. The increase in the number of private sector players has had a positive effect on investor service standards, portfolio disclosure norms and fund performances. With the economy picking up, the mutual funds industry is expected to grow at a rapid pace. Industry experts see money moving into the lap of mutual funds from banks as to mutual funds offer the same convenience with higher returns.

The Indian capital market has followed the western model of its various activities. With the flavour of liberalisation, structural reforms in the financial sector, it is a dire need to keep pace with the developments in the stock markets of the developed countries. In the early 90's investment in shares has always been a favoured investment avenue available for the investors. Owing to this fact, the Indian stock market has registered an

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\(^1\) Dr. B. Murugesan and D. Aravazhi Irissappane – “Mutual Vs Banks” Research Paper presented in the National seminar on Commerce education jointly organised by the Dept. of Commerce, Pondicherry University and ICAFAI – Jan 2000
impressive growth and hence the stock market gained the confidence of the investing community. While in April 1992, when all the investors were actively engaged in securities trading, the stock market virtually collapsed due to unearthing of the scam. This made the investing community to quit the stock market.

At this juncture, to instill confidence in the minds of the investors, the government has pursued several structural reforms. The recent policies of liberalisation, devaluation of Indian rupee followed by partial convertibility, freedom for Indian companies to enter into international capital markets, abolition of control on pricing of securities and tax exemption for the investments in mutual funds have paved the way for a strong come back for the Indian capital market. The year 1992-93 marked the turning point in the history of mutual funds in India. The need and scope for mutual funds have risen high due to phenomenal increase in domestic savings, improvement in deployment of investment through vibrant capital market. This calls for a market-based institution, which can tap the vast potential and direct them into lucrative investments. Thus mutual fund gained its significance.

Among the open-ended and close-ended classifications there are various types of mutual fund products available for the investors in India that can be broadly classified as follows:

**Equity Based Funds**

These funds are Pure growth funds, Tax saving schemes (ELSS), Sectoral funds, Index funds and Equity benchmark schemes etc.
**Debt Based Funds**

These funds are Income Scheme, Money Market Fund, Liquid Funds, Gilt Funds and Bond funds etc.

**Hybrid Funds**

These funds are Monthly Income schemes, Assured return schemes, Balanced Funds, Pension Scheme/Retirement Benefit plan and Funds targeting specific investor class (institutional investors, NRIs or children) etc.

Today the mutual Fund has to offer the life cycle financial planning/comprehensive investment solutions to the needs of the investors which will have to be essentially technology driven. The mutual funds should strive to provide a one-stop investment shop for investors. What it means is that the mutual fund should cater to the investor's need of saving over his/her lifetime.

**MUTUAL FUND SCHEMES**

The mutual funds industry in the USA, the UK and Japan has achieved tremendous diversity in terms of innovative funds (schemes). The launching of innovative schemes in India has been rather slow due to the prevailing investment psychology and infrastructural inadequacies. Mutual fund investors in India, who are largely from the upper-middle-class income group, are risk-averse and, as such, more interested in schemes with tolerable capital risk and returns over bank deposits. This has restricted innovation and the launching of more risky products in the Indian market.

Though the first, and by far the most popular, mutual fund scheme (Unit 64), is an open-ended scheme. Open-ended schemes have not been very popular in India
unlike the USA and the UK. By the end of March 1996 the total schemes (excluding UTI's three venture funds) numbered 194, out of which only 31 schemes were open-ended and the rest were close-ended. According to a report by AMFI there are at present 344 schemes. Out of 450 schemes (as on 31 March 2000) 175 schemes were open-ended and 128 were close-ended and 41 assured return funds.\(^1\) The popularity of close-ended schemes is on account of two reasons. First, before the promulgation of SEBI regulations in 1993, public sector mutual funds came out with many close-ended income schemes with assured returns. Second, due to the stock market boom during 1991-92, investors have preferred growth-oriented equity schemes. According to L.C. Gupta (1993) 48.3 per cent of sample household owned pure equity schemes. Close-ended schemes which are listed in stock exchange have many advantages – possibility of superior returns, easy liquidity (due to listing), selling at market price and, for the managers, easier cash management due to fixed capitalisation.

Mutual fund schemes can also be classified according to investment objectives as follows. They are Income schemes, Income and Growth schemes, Growth schemes, Tax-saving schemes, Industry-specific schemes and Special purpose schemes

**INDIAN OFFSHORE FUNDS**

In the wake of the economic reforms initiated in 1991, India has emerged as one of the most attractive markets of the world. Economic reforms and liberalisation measures have opened the Indian economy not only to the domestic private sector, but also enabled global investors to put their money in the Indian market. In this context offshore mutual funds (called country or international funds) have appeared as an

\(^1\) March Monthly report of the Association of Mutual Funds, "Mutual fund assets up 20 per cent", *Business line*, April 22, 2000.
attractive investment avenue for global investors. A number of offshore funds have been launched by mutual funds in India, either independently or jointly with foreign investment management companies. Many FIIs have also launched offshore funds.

Between July 1986 (the year of launch of their first offshore fund by UTI) and December 1996, 20 offshore funds were launched successfully, out of which 10 were open-ended and the remaining close-ended.

Before 1993 most of the offshore funds were launched by the public sector mutual funds like UTI, SBI and Canbank and most of them were open-ended. The year 1993 seems to have been a turning point for Indian offshore funds not only in terms of the number of funds launched but also in terms of composition and management. During 1993 seven offshore funds (the highest in a single year) were launched, of which two were close-ended. Four more close-ended funds were launched in 1994. Some funds were even exclusively launched by foreign fund managers, indicating a high level of confidence of foreign investors and foreign fund managers due to the successful implementation of Indian Economic reforms.

STATEMENT OF THE PROBLEM

In India, due to the mushroom growth of mutual fund industry during 1986-1999 and the encouragement given by the Government in the form of tax concession for the investors, the capital market has become a place for the Foreign Institutional Investors. This was further activated by the abolition of the Capital Issues Control Act. Since the mutual fund industry has become a competitive investment arena, the performance of the various funds and schemes have to be evaluated to bring out the true and fair picture of these institutions in the interest of the investing public.
The interest of the investors in mutual funds will have to be protected. The expectation with which the investors entered into the mutual fund industry is to be fulfilled to a certain extent. The fund management have to fulfill their committed obligations towards the expectations of the investors. During mid 90’s mutual fund schemes are being quoted in the stock market well below their Net Asset Values (NAV) published by the funds. The investors having waited for long years for their fund’s appreciation get disappointed and they tried to windup their units either to the Fund or in the stock market. Some of the mutual fund players, who assured certain percentage of returns to the unitholders, are unable to carry out their commitment. As things stand today, when the investors have many options for their investments, it is very apt to identify the successful schemes, to analyse the investment policies adopted by the Funds and the Fund management’s skill in market timing and selectivity aspects of securities, transparency factor etc. Hence the present study makes an attempt to evaluate the performances of mutual fund schemes by identifying any gap between the expectation of the investors and performance of the fund. Further it makes an attempt to offer suitable solutions for the grievances if any.

OBJECTIVES

1. To analyse the need for investment in Indian mutual funds and to identify the factors responsible for their steady growth.
2. To study the investment pattern of mutual funds.
3. To analyse the scheme-wise performance of the close-ended funds of select institutions.
4. To analyse the institution wise performance of close-ended funds of select institutions.
5. To study the investor perception of close-ended mutual fund schemes.
SELECTION OF THE TOPIC

In the recent past security markets have been dynamic and now one can see that there is a huge shift in the share market front especially in favour of mutual Fund Industry. The number of investors investing in mutual fund schemes has shot up tremendously. At present mutual funds investors have 36 mutual fund families and more than 400 schemes to choose from. While UTI monopolised the mutual fund industry since its inception, new players like commercial banks and investment institutions also entered into the mutual fund industry. SBI mutual Fund (a subsidiary of State Bank of India) was the first entrant followed by Canbank mutual Fund, LIC mutual Fund, GIC mutual Fund, Indbank mutual Fund and BOI mutual Fund with open-ended and close-ended schemes. With the opening up of the industry to the private Sector funds, there was a sharp increase in the number of players.

Owing to the arrival of number of new entrants and their variety of new mutual fund products, the investors were puzzled over the selection of schemes and institutions to suit their preferences and needs. The mutual funds were not in a position to perform to the expectations of the investors due to the dismal performance of the Indian Capital Market. Till the end of 1998, the stock market was doing very badly, the investors had lost their confidence completely in mutual fund Industry. This trend was further activated by the heavy discount to NAV factor, prevailed in the Market. The spectacular rise in the stock market during 1999, has thrown up some truly sparkling performance. Due to this strong ups and downs the investors are kept at their low ebb as far as the future of their investments are concerned. Owing to these facts it is very apt to evaluate the performance of these mutual fund Operations, Schemes and Institutions to give right direction for the existing unit holders and to the
future aspirants. Hence the present study, "PARADIGM SHIFTS IN THE PERFORMANCE OF INDIAN MUTUAL FUNDS : AN ANALYSIS WITH REFERENCE TO CLOSE-ENDED FUNDS OF SELECT INSTITUTIONS".

IMPORTANCE OF THE STUDY

Mutual fund is a new financial institution which has entered in to the Indian Capital Market with a bang which suits the requirements of the small and medium investors who are averse to risk element. mutual funds compete for investor's savings with other financial intermediaries and individuals managing their own portfolios. As in any business endeavour, success depends on being able to provide the services demanded by its customers. The essential service demanded by the mutual fund unit holders is presumed to be a return on their investment commensurate with specified levels of risk and promise of liquidity. The challenge before the analyser is to measure how successful a fund is, in providing this investment service. Looking at investment return alone is inadequate because it ignores risk, though the aim of these mutual fund managers is to professionally manage the funds and to provide a reasonable return on them, after deducting their management fees. For better returns some amount of liquidity has to be sacrificed by the unit holders. By acting with deligence, enough foresight and in-depth stock market analysis, total liquidity can be achieved.

The present study examines the scheme wise investment returns to the unit holders, portfolio Composition, liquidity aspects present in the scheme etc. Further the study examines the opinions of these unit holders with regard to the performance of the select close-ended mutual fund schemes and the extent of services rendered by the study units namely UTI, Canbank MF, and LICMF to its investors. Some of the
this extent pertinent to Indian mutual funds only. Therefore this study might stand in
good stead to understand the role of mutual funds in Indian capital market, views of
fund managers, brokers professionals and investors. It also deals with various
protective measures to be taken to safeguard the interest of existing unit holders and
prospective investors in mutual fund schemes. It also makes an attempt to shed light
and to bring out the reasons for the success or failure of these mutual fund schemes.

SCOPE OF THE STUDY

The present study throws light on the problems of investors in mutual funds in
and around Chennai, Mumbai, Pune, And Delhi and therefore, the sample survey is
mainly confined to the geographical areas in and around these cities. This study also
examines the performance of various income and growth schemes of close-ended
mutual fund schemes of select institutions namely. UTI, Canbank MF, LICMF etc.,
with the help of secondary data obtained from the mutual fund head quarters and
from research organizations such as Value Research, Delhi, Economic Times
Research Bureau, Credence, Mumbai and UTI Capital Market Research wing,
Mumbai, etc., Since the close-ended funds constitutes more than 70 per cent of total
investible funds. The researcher has taken only the close-ended funds for the
analysis.

Though there is a gamut of the different mutual fund schemes with varied
investment objectives such as growth, income, Income and growth, tax saving etc.
The researcher has considered only income and growth schemes of close-ended funds
for the present study. These two schemes floated by different institutions alone could
gain more than 72 per cent of total money mobilised by mutual fund units in India.
At present, there are more than 40 schemes floated as many as 34 mutual fund
families institutions. Due to paucity of time and considering the quantum of data to be analysed, this study is restricted to only to the Close-ended income and growth schemes of UTI, Canbank MF and LICMF, etc. The mutual fund schemes have been launched in India by four different categories of Institution such as (1). UTI (2). Banks (3). Investment Institutions (4). Private sector Institutions. Since UTI is a pioneer in the Launching of mutual fund schemes in India and also as it enjoys a special status, it has been selected deliberately.

To give due representation to the bank sponsored mutual funds this study has included the Canbank MF for its performance analysis. Canbank MF is selected from among the other bank sponsored mutual funds as it is a poineer institution together with SBI MF in the floatation of mutual fund schemes in the banking sector and it occupies a dominant position. Among the Non-UTI public Sector mutual funds which control 16.71 per cent of total investible funds, Canbank MF alone controls more than 4.47 per cent stands ahead of SBI mutual fund's share of 3.76 per cent. Among the institution based funds LIC is chosen because of its active role played in mutual fund operations in India. It had launched many schemes and started its operation during June, 1989 ahead of GIC MF. It controls more than 2.44 per cent of investible funds with in Non-UTI pubic sector mutual funds category. It stands ahead of GIC MF whose share is only 2.05 per cent and also in terms of number of schemes floated by these funds. The private Sector mutual funds are not taken up for analysis because of their very marginal contribution to the mutual fund industry. Though the private entrants exceed in their number compared to other categories their total holding works out to only 3.82 per cent of total investible funds collected by the mutual fund industry in India.

The reference period of the study is for 10 years from June 1988 to July 1998.
DATA SOURCES, SAMPLE METHODOLOGY AND HYPOTHESIS

For the present study, the required data have been collected both from primary and secondary sources.

Sampling Design

For the present study, the researcher has employed interview schedule for the collection of data regarding the views of the mutual Fund investors to identify their reaction towards the performance of the different schemes from the respondents namely mutual fund unit holders of Chennai, Mumbai, Pune and Delhi and to find out the most influential factor which acts as a criteria for the selection of a mutual fund Institution and specific schemes by the investors for their investments. A separate interview schedule is used to get the opinions of the Fund Managers from the mutual fund head quarters situated at Mumbai. The researcher collected names and addresses of the unit holders of these four regions from the respective mutual fund headquarters and applied convenient sampling method for the analysis purpose. However utmost care was taken to have representative sample and it was restricted to 300. One hundred each from UTI, Canbank MF and LIC MF and 9 mutual Fund Managers 3 each from the respective Institutions.

HYPOTHESIS

1. The growth of the capital market resulted in the growth of mutual fund Industry.

2. The investment pattern of mutual funds coincides with the investment objectives of the schemes.

3. The size of the corpus and the image of the institutions are two major factors responsible for the success or failure of the scheme.
4. Preference towards mutual funds hovers around the factors such as income level, age, knowledge of the stock market operation.

5. The products of mutual funds are small positioned somewhere between a share on one side and a bank deposit on the other.

To select the sample for analysis, a list of close-ended mutual funds that were in operation during the period June 1988 through June 1998 was finalised taking into account, the factors like more or less uniform date of launching, approximately similar amount of corpus, same investment objectives etc. It will facilitate comparison possible within the broad investment objective. The required data for analysis were obtained from Credence an institution which is monitoring the mutual fund performance; Value Research Delhi, Economic Times Research Bureau Mumbai, UTI Institute-of-capital Markets Mumbai, Canbank mutual Fund Research Wing, Mumbai and LIC mutual funds headquarters, Mumbai etc.¹

Out of 200 odd schemes that were in operation as on May 1998 excluding private Sector mutual funds since it is a recent origin, only 34 income and growth scheme of three mutual Fund organisation namely UTI, CANBANK MF, LIC MF.

The number of schemes were restricted based on availability of data, number of years of operation, i.e. minimum 3 years upto Dec. 1999. The exclusion also includes all open ended funds, and mutual fund schemes other than growth schemes and Income schemes of close-ended funds. The cut-off date for each scheme was the last date on or before March 31, 1998, on which date, its NAV was declared. The

¹ Since credence and value Research are basically tracking the performance of various mutual Fund organisation only from 1994 and 1996 respectively, the data for the period between 1988 and 1994 were obtained from the respective mutual fund headquarters. Further the data collected from these research organisations were cross verified with the respective mutual Fund organisations before in corporting in the analysis.
schemes selected have been classified under the two groups according to their objectives — Growth and Income and compared only within that group.

Based on their risk-of-loss ($R_{CL}$) factor, the scheme have also been classified into three risk categories.

**High risk**: Schemes falling within the top one-third of the risk scale

**Average risk**: schemes falling within the middle one-third of the risk scale

**Low risk**: Schemes falling with the bottom one-third of the risk scale.

The sample will be sorted by the two investment objectives of three mutual fund organisations. Each of these two investment objectives is assumed to translate into a unique risk category. This is consistent with the methodology employed by other researchers.

Klemkosky (1976) observed the risk will be equal with in groups and different risk between groups. This effectively divides the security market line into multiple segments of risky assets. The lowest risk category of mutual funds, money market mutual funds, will not be evaluated.

The initial 450 fund sample comprised of 80 growth (G), 155 Income (I) 55 balanced (B) 76 Tax Saving (Tax) 42 Gilt (Gt) 24 Sectoral (Sec) and 18 Money Market (MM) funds. Each list of funds will be screened and those funds that were not in operation for the entire period, and schemes which are not covered by the scope of

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Klemkosky (1976) extended the work of Rients and Vandenberg (1973) by using newer Weisenberger classifications and monthly data over a ten year period (1964-73) and a five year period (1969-73). The investment objectives were Maximum capital Gain (MCG) Long-term Growth (LTG), Growth and Current Income (GCI), Income (I) and Balance (B). He notes that there is a consistent relationship between risk and investment objective classification, and that risk is relatively constant over time. One-way analysis of variance was used to test the hypothesis of equal risk classifications. The null hypothesis of equality of average risk was rejected for both the five year and ten year Periods.
this research study will be eliminated. This is consistent with the selection process used by Grinblatt and Titman (1989, 1992, 1993, 1994)\(^1\)

The researcher has included only close-ended funds floated by three Institutions namely UTI, Canbank MF and LICMF. The Close-ended schemes floated by private sector mutual funds which is of a recent origin in Indian Context and schemes launched by BOI mutual funds, PNB mutual funds and Indian Bank mutual funds, BOB mutual funds, Can bank mutual funds and GIC mutual funds were excluded for the analysis purpose. The exclusion has taken place due to non-availability of data owing to non-publication and the absence of strong research base in the respective organisations.

This screening will result in a total sample of 34 funds consisting of 20 Growth and 14 income funds. The schemes chosen for the final analysis is listed in table 1.1 which contains information concerning investment objective, Investment institution and the size of the sample.

![Table 1.1](image)

\(^1\) Grinblatt and Titman (1989, 92, 93, 94) use a similar screening process and conclude that survivorship bias was negligible. Additionally, survivorship bias would act to bias the result against finding performance differentials if mutual funds that performed in a substandard fashion went out of business.
The objective of this study is to compare the performance of the funds vis-à-vis a benchmark portfolio (market index). Using monthly net Asset value (NAV) of select sample funds, their performance has been compared with that of the market. The BSE sensex 30 scrips and BSE National Index of 100 scrips are taken as the proxy for the market. Selection of this BSE National Index, is consistent with previous studies and K.G. Sahadevan, M. Thiripalraju (1997)¹ and Financial express and value Research 1992 utilised these indices for the evaluation process.²

Techniques for Analysis

To arrive at the research findings, conclusion for the present study, the relevant statistical techniques namely chi-square, time series analysis, kendalls concordance test of hypothesis were employed. Based on the above mentioned objectives, the present study also employs a few other techniques to measure the performance of different mutual fund schemes and institutions such as, weighted average, Risk return analysis, Anova test, Treynor, Sharpe and Jensen measures etc. These measures were used to examine the performance of the different schemes floated by the said institutions. Further the study made an attempt to find out, whether the Fund management has the ability to forecast the market timing and the selectivity factors with which the institution performance can be assessed by employing Henriksson and Merton model and Treynor and Mazuy.

² The Financial Express and Value Research (1997) compared the fund’s performance with various benchmarks over different time Periods.
COMPUTATION OF RETURNS

Continuously Compounded monthly net returns will be computed by taking log of the change in wealth over the holding period. This is consistent with the study of Klemikosky (1973). In the same manner Sahadevan (1997) assessed the performance of few funds comparing the monthly average rate of return and standard deviation of each fund with that of the market Index.

The return is calculated by using the following formula:

\[ R_{it} = \frac{NAV_{it} + DV_i + CG_i}{NAV_{it}} \]  

(1.1)

Where \( R_{it} \) = Return on Fund, during the period t.

\( NAV_{it} \) = Net Asset value of fund i at time t.

\( DV_i \) = Dividend and Interest Paid of funds i during the period.

\( CG_i \) = Capital Gain distribution paid on Fund i during the period.

Index returns will be computed similarly.

MEASURES OF PERFORMANCE

To detect and examine performance differentials and performance persistency, the researcher used the most commonly used three measures. They are the traditional Sharpe (1966), Treynor (1965) and Jensen measures (1968).
(i) The Sharpe Measure

The Sharpe\(^1\) (1966) measure is used by Horowitz\(^2\) (1996), Klemkosky (1973\(^3\), 1977\(^4\)), French and Henderson\(^5\) (1985) and Intelligent investor-credence survey (1999)\(^6\) to examine the return per unit of risk investors receive. The wise investors will select the portfolio that provides the highest return per unit of risk borne. Risk in this measure is defined as the standard deviation of the portfolio. The sharpe ratio adjusts excess return for total risk (measured as Standard Deviation of the portfolio) including risk caused by lack of diversification.

The Sharpe measure is computed as,

\[
S_p = \frac{R_p - R_f}{Q_p}
\]

Where \(S_p\) = Sharpe Measure

\(R_f\) = Risk Free Rate of Return

\(R_p\) = Return on fund (or) portfolio – Risk Premium

\(Q_p\) = Standard Deviation of the Fund or portfolio – Total risk.

The Sharpe measure is criticised by Jensen\(^7\) (1968) Arditti\(^8\) (1971) for its inadequacies such as, it is only concentrating on ranking and not on whether the

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differences in rankings are merely due to chance or if they are statistically different from one another. Though there are few criticisms against using this measure for evaluating the performances of mutual funds, the researcher used this as it is a traditional and mostly accepted measure.

(ii) The Treynor Measure

The Treynor\(^1\) (1965) measure is used by Sharpe (1966) Klemkosky (1973, 1977), French and Henderson (1985), Eun, Klody, and Resnick (1991)\(^2\) and Droms and Walker (1994)\(^3\). It also seeks to evaluate the return per unit of risk the investors receive, but uses the Beta of the portfolio as a risk surrogate. The Treynor measure adjusts the excess return on portfolio for risk measured as Beta (\(\beta\)) of the portfolio.

The Treynor measure is computed as

\[
T_P = \frac{R_P - R_f}{\beta_P}
\]

\[\text{(1.3)}\]

where \(T_P\) = Treynor measure

\(R_f\) = Risk free rate

\(R_P\) = Return on fund (or) portfolio

\(\beta_P\) = beta of the fund.

This measure is also criticised by Jensen (1968) for concentrating only on ranking and not on absolute performance. Further it can only rank performance, however, it does not provide any evidence on whether the differences in ranking are mere due to chance or if they are statistically different from one another.

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In spite of a few shortcomings existing in this measure, the researcher used the Treynor measure as it was widely accepted by many research studies.

(iii) Jenson Measure

The Jenson (1968)\(^1\) measure is computed by using ordinary Least Squares (OLS) regression to regress fund risk premiums on market risk premiums. This is the most popular measure of performance and it is used extensively. This procedure enables returns to be adjusted for risk by fitting the market model. Beta removes the risk of the portfolio and alpha will equal zero if the portfolio return lies on the Security Market Line (SML). If the portfolio outperforms the SML, alpha will be positive, If the portfolio under performs the SML, alpha will be negative. If risk and return are positively related, \( \beta \) will be positive and significant. The fit of the model can be examined by the \( R^2 \), which should be high. The F-Statistic should be sufficiently high to reject the null hypothesis that alpha and beta together fail to explain returns.

The equation is the standard market model.

\[
R_{it} - R_{Ft} = \alpha_i + \beta_i (R_{mt} - R_{Ft}) \quad \ldots \quad (1.4)
\]

Where \( R_{it} = \) rate of return for Portfolio (i) during the time period t.

\( R_{Ft} = \) Risk free Rate of Return during time period t

\( R_{mt} = \) Return on the Market Proxy (or) Index during time period t.

\( \beta_i = \) The systematic risk for portfolio i.

\( \alpha_i = \) The abnormal return for portfolio t

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The OLS method required the following assumptions

1. The relation between risk and return is linear and constant
2. The market risk premium is a non-Stochastic variable (X is fixed)
3. The error term is normally distributed, has a mean value of zero, and constant variance for all observations. Further the error terms are independent. The expected covariance between the errors of fund i and fund j is zero.

The Jensen measure can be criticised on numerous counts. First, it is subject to the inability to observe the market portfolio. Roll (1978)\(^1\) shows this can cause ambiguity in ranking performance. Second, numerous anomalies to CAPM have been discovered Fama and French (1992)\(^2\) declared beta to be dead.

Though there are a few shortcomings persisting in the Jensen measure the researcher adopted this technique for the analysis since it has been used by many researches in the past. And it is considered to be a mostly accepted tool for evaluating the performance of the portfolio.\(^3\)

In brief the various measures of performance of mutual funds are explained in this part.


(a) Returns

Returns are compounded annual returns. The NAV is to be adjusted for dividends, capital appreciation or rights and bonus etc. The adjusted NAV figure is calculated. The adjusted NAV is arrived at by reinvesting the money which the fund has paid out at different times in the form of dividends. It is assumed that if this money is reinvested it would grow in the similar fashion as the NAV of the fund.

The point to be noted while comparing the mutual funds with index portfolios is that the mutual funds, inner management and transaction costs whereas index portfolios do not. But on the otherhand mutual funds earn dividends on their holding Where as it is not so.

Assumptions.
1. Bombay Stock Exchange Sensitive 30 scrips index and the BSE National Index 100 scrips are the two benchmark portfolios are the true indicator of the Market Behaviour.
2. The risk free rate of return is 9.5 percent.

(b) Risk

Risk is measured by the extent of fluctuations in the asset value. If the NAV is subject to high fluctuations then the risk would be high. Generally larger the number of securities in the portfolio lower the risk level. Risk is measured by Standard deviation.

(c) Beta

Beta is a measure of stock's relative volatility to the Market index. High Beta portfolios are more volatile than the market index. Whereas low Beta portfolios are less volatile than the Market index.
Portfolio Beta is **less than one** = Non Aggressive portfolios

Portfolio Beta is **greater than one** = Aggressive portfolios

With the help of Capital asset pricing Model (CAPM) Beta can be computed as the Ordinary Least Squares (OLS) estimates of simple linear regression Model. Monthly observation of NAV and market index have been taken for the Computation purpose.

(d) Extent of diversification or The Measure of Systematic risk.

The Co-efficient of determination of the simple linear regression Model (CAPM) i.e. $R^2$ tells us about the extent of diversification of the portfolio. Systematic risk is the market related risk, this risk is non-diversible in nature. Whereas unsystematic risk measured by $(1-R^2)$ is the Company/industry specific risk and is diversifiable in nature.

High $R^2$ implies that the portfolio is highly diversified. If the Co-efficient determination ($R^2$) is high then it implies that high amount of risk Which the portfolio is subject to is market related which is non-diversifiable in nature.

(e) Sharpe Measure

This measure is defined as the ration of realised excess portfolio return $R_p$ in excess of Risk free rate of return to Total Risk or Standard Deviation of the Scheme.

(f) Treynor Measure

This measure is the ration of realised excess portfolio return $R_p$ in excess of Risk free rate of return to beta of the portfolio.
INSTITUTION-WISE ANALYSIS

The final measure of performance used for analysing the Institution-wise performance is based on the statistical techniques presented by Henriksson and Merton (1981)\(^1\) for testing forecasting ability with a particular emphasis on the market-timing ability of investment managers. The tests are derived from the basic model of market timing developed by Merton (1981)\(^2\), where the forecaster predicts when stocks will outperform riskless securities vice-versa.

Merton (1981) evaluates the market timing performance of 116 open-ended mutual funds using the parametric and non-parametric techniques presented by Treynor and Mazuy (1966). In Section II, the statistical techniques developed by Treynor and Mazuy was employed for the same purpose. In both cases, no evidence of market-timing ability was found. It is assumed that if the fund manager is able to predict the ups and downs of the market that indicator for an efficient institution.

THE HENRIKSSON AND MERTON PARAMETRIC TESTS (1981)

The model suggests that the beta of the portfolio takes only two values: a large value if the market is expected to do well and a small value otherwise. This involves fitting of two separate lines: one line is fit for the observations when the market outperforms the risk-free asset and the other line is fit when the market under performs the riskless asset. The idea is implemented by estimating the parameters in the following regressions.

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Where,

\[ R_{PT} = \text{return on mutual fund P for period } T. \]
\[ R_{RF} = \text{return on risk-free asset for the period } T. \]
\[ R_{MT} = \text{return on market index for the period } T. \]
\[ e_{it} = \text{Error term} \]

Where (1) and (2) deal with market upturn and downturn respectively. C, the beta differential \((\beta_{IP} - \beta_{2P})\) is used as a measure of market timing. A significantly positive \(C\) implies superior market timing.\(^1\)

The second measure used for testing the market timing ability of the fund management with which the efficiency of the institution can be assessed is explained below.

**TREYNOR AND MAZUY (1966) MODEL**

Treynor and Mazuy\(^2\) (1966) used the idea of holding a high beta portfolio when the market is raising and a low beta portfolio when the market is declining, to analyse the timing ability of the mutual funds.

Their procedure was to fit a quadratic curve to the performance data:

\[ (R_{it} - R_{it}) = a_i + b_i (R_{mt} - R_{it}) + C1(R_{mt} - R_{it})^2 + e_{it} \]

Where \(R_{it}\) is the return on fund \(i\) in period \(t\).

\(R_{mt}\) is the return on the market index in period \(t\).

\(R_{it}\) is the return on the risk-less asset in period \(t\).

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\(^1\)Henriksson and Merton studies 116 open-ended mutual funds for the period 1986-80; they did not find support for the hypothesis that mutual fund managers are able to successfully time the market.

\( e_t \) is the residual return in period \( t \).

\( a, b, \) and \( c \), are constants

The authors of this research paper have devised a statistical test of mutual funds historical success in anticipating major turns in the stock market. Applying this test to the performance record of 57 open-ended mutual funds, they found no evidence to support the belief that mutual fund managers can outguess the market.

For evaluating the performance of different growth and income schemes of few select institutions, viz., UTI, LIC MF and Canbank MF, the following procedures are evolved.

1. To make the comparison meaningful, the scheme NAV’s are adjusted for dividend payouts, bonus and right issues which the mutual fund would have come out with.\(^1\) This is consistent with the Intelligent Investors comprehensive survey (1999).

2. While comparing the mutual funds performance with that of bench mark portfolios, the points such as the expenses incurred by the management and the dividend earned by the mutual funds are not taken into account. These adjustments could not be carried out as the data regarding the dividend income on portfolios are not available during the 1 half of the study period.

3. Schemes investing primarily in equities should not be compared with those investing primarily in debt. The ranking of returns is within the peer group.

\(^1\)The methodology adopted by the intelligent investor’s comprehensive survey (1999) of mutual fund performance, have calculated 3 month return and one year return by taking percentage change in NAV’s adjusted for rights, bonus issues and dividend payouts, Intelligent Investor, January 23, 2000.
LIMITATIONS OF THE STUDY

(1) Regarding primary data, owing to the time and cost constraints the size of the sample was restricted to 300 and sufficient care was exercised to see that, this in no way affects the representativeness of the sample. As the present researcher conducted the sample survey by the personal Interview Technique, the smallness in the size of the sample may be justified.

(2) The study is based on the opinions expressed by the fund managers, investors and professionals. These opinions are likely to vary on account of completing the filling up of the Interview schedule at different stages over a period of time, by the respondents. Due to paucity of information and low frequency of publication of data by the mutual fund institutions, this study is restricted to only monthwise analysis.
ASSUMPTIONS

1. It is assumed that the right issues are fully subscribed by the unit holders.
2. It is assumed that the monetary returns received by the unit holders are reinvested in the fund portfolio.
3. It is assumed that, Bombay stock exchange (30 scrip) sensex index and (100 scrip) BSE (NATEX) are the true indicators of the market behaviour.
4. The risk free rate of return is 9.5 per cent. This is consistent with a few analysis works carried out by the Indian investment magazines. (1994) Express Investment Week magazine. Capital Market Research Bureau (1993)¹ Dalal street journal (1993), Financial express and Value Research 1997 (a leading mutual fund monitoring agency)

SCHEME OF THE RESEARCH REPORT

This doctoral dissertation has been divided into eight chapters.

The First chapter gives a vivid account of the need for mutual Fund, statement of the problem, objectives and importance of the study, Methodology adopted, limitations and assumption of the study and the organisation of the research report.

The Second chapter captioned "Review of Literature" makes an attempt to trace the phase in which the portfolio theory was developed and the framing of different measures to evaluate the performance of mutual funds. In the later half the literature review is presented.

¹ Capital Market Research Bureau (Oct 1993): The study made an attempt to present how mutual funds and its various schemes fared during 1992, (bear phase). The evaluation process compared the change with BSE(NATEX)
The Third chapter titled “Growth of mutual funds in India” examines the historical developments, and its evolution, success and future prospects of its various schemes floated by different institutions to satisfy the needs of the investors.

The Fourth chapter captioned “Investment Pattern of Indian Mutual Funds” attempts to present the various developments with regard to the launching of different schemes by various institutions with varied investment objectives and the investment strategies adopted by the mutual fund Managers.

The Fifth chapter “Analysis of Data-I” evaluates the performance of different closed-end schemes of UTI, CANBANK and LIC.

The Sixth chapter “Analysis of Data – II” evaluates the performance of different institutions namely, UTI, Canbank MF and LIC MF that are engaged in mutual fund operations in India by using the measure of market timing and selectivity.

The Seventh chapter “Investor’s perceptions towards Indian Mutual Fund”, examines the respondents’ namely investors and mutual fund managers’ opinions on the issues involved in mutual funds operations such as discount to NAV factor, delayed listing in Stock exchanges, transparency factor etc. and identifying the factors that are responsible for selecting a specific mutual fund Institution and schemes among other 375 schemes launched by various mutual fund Organisation.

The Eighth chapter titled “Summary and Conclusion” consolidates the results of the performance analysis of different schemes and Institutions.