

A Systematic Review Study on Growth of Mutual Fund in India

Dr. Shikha Kumrawat

Assistant Professor, Medi-caps University, Indore

Abstract-

In the backdrop of liberalization and private participation in the Indian mutual fund industry, the challenge to survive and retain investor confidence has been a prime area of concern for fund managers. For small investors who do not have the time or the expertise to take direct investment decision in equities successfully, the alternative is to invest in mutual funds. The performance of the mutual fund products become more complex in context of accommodating both return and risk measurements while giving due importance to investment objectives. In this paper, an attempt has been made to study the performance of selected schemes of mutual funds based on risk-return relationship models and measures. A total of 23 schemes offered by six private sector mutual funds and three public sector mutual funds have been studied over the time period April 2000 to March 2023 (13 years).

The analysis has been made on the basis of mean return, beta risk, co-efficient of determination, Sharpe ratio, Treynor ratio and Jensen Alpha. The overall analysis will be done to find out the best performers and fund which are showing poor below-average performance when measured against the risk-return relationship models.

Keywords- Mutual funds, equity, investment decision, risk management.

Introduction-

As a result of COVID-19-induced lockdowns, the mutual fund industry's SIP collections fell by 4% to INR 96,000 crore in FY 2020- 2021. This resulted in income uncertainty. Many investors chose to halt their SIPs as a result of the pandemic. From a peak of Rs 8,641 crore, the contribution fell for 11 months in a row before breaking through to new highs.

The average assets under management (AAUM) of the Indian Mutual Fund Industry for February 2022 stood at INR 38,56,140 crore. The industry's AUM had crossed the milestone of INR 10 trillion (INR 10 lakh crore) for the first time in May 2014. In around three years, the AUM increased more than twofold, and in August 2017, it crossed INR 20 trillion (INR 20 lakh crore) for the first time. The AUM size crossed INR 30 trillion (INR 30 lakh crore) for the first time in November 2020. The industry's AUM was INR 37.56 trillion (INR 37.56 lakh crore) as of February 28, 2022. The rising digital penetration, smart cities, and increased data speeds also facilitate the drift of asset shares toward smaller cities and towns. The increased retail contribution through SIPs shows the level of digital penetration in India. The total number of accounts (or folios, as per mutual fund parlance) as of February 28, 2022, was 12.61 crore (126.1 million units). Before engaging in

analysis behavior of mutual funds, first we get introduction of mutual funds and their history of establishment.

A mutual fund is a trust that pools the saving of a number of investors who share a common financial goal and investment objective.

The income earned through this investment and the capital appreciation realized are shared by its unit holder in proportion to the number of units owned by them

There are some myths also prevalent for mutual funds for general public opinion such as-

- Mutual fund invests only in shares.
- Mutual fund is prone to very high risk/activities traded.
- Mutual fund is very new financial market.
- Mutual fund is not reliable and people rarely invest in them.
- The good thing about mutual fund is that you don't have to pay attention to them.

The origin

The mutual fund industry in India started in 1963 with formation of UTI in 1963 by an act of parliament and functioned under the regulatory and administrative control of the RBI. A strong financial market with broad participation is essential for a developed economy. First mutual fund in 1963. Encouraging saving and investment and participation in the income, profit and gain accruing.

History

•Phase I (1964 – 1987) –

Started in 1963 with formation of UTI in 1963 by an act of parliament and function under RBI. In 1978 UTI was de-linked from the RBI and the Industrial Development Bank of India (IDBI) took over the regulatory and administrative control in place of RBI. Unit scheme 1964 (US64) was the first scheme launched by UTI. At the end of 1988 UTI had ₹ 6700cr of Asset Under Management (AUM).

•Phase II (1987 – 1993)-

The year 1987 marked the entry of the public sector mutual fund set up by public sector banks and Life Insurance Corporation of India (LIC) and General Insurance Corporation of India (GIC). SBI mutual fund was the first non-UTI mutual fund established in June 1987. While GIC had set up its mutual fund in Dec. 1990. At the end of 1993 the mutual fund industry has Asset Under Management of ₹ 47000cr.

•Phase III (1993 – 2003)

The India securities market gained greater importance with the establishment of SEBI in April 1992 to protect the interest of the investors in securities market and to promote the development of and to regulate the securities market. The number of mutual funds increased over the years with many foreign sponsors setting up mutual funds in India also the mutual fund industry witnessed several mergers and acquisition during this phase. As at the end of Jan. 2003 there were 33 mutual funds with total AUM of ₹121805cr out of which UTI had AUM of ₹44541cr

•Phase IV (2003 – 2014)

In Feb. 2003, following the repeal of the UTI act 1963, UTI was bifurcated into 2 separate entities.

1. The Specified Undertaking of the Unit Trust of India (SUUTI).

2. UTI mutual fund with function under SEBI regulations.

With the bifurcation of the erstwhile UTI and several merger taking place among different private sector fund the mutual fund industry entered its fourth phase of consolidation

•Phase V (2014 – current)

Taking cognizance of the lack of penetration of mutual fund especially in tier II and the tier III cities and the need for greater alignment of the interest of various stakeholder, SEBI introduced in several progressive measures in sept 2012 to re-energize the India mutual fund industry and increase mutual fund penetration. In due course the measure did succeed in reversing the negative trend that had set in after the global melt down and improved significantly after the new govt.

Literature Review-

Early studies on mutual funds included the several works of Jensen (1968), Sharpe (1966) and Treynor (1965) who used the capital asset pricing model to compare risk-adjusted returns of funds with that of a benchmark market portfolio. The findings of Sharpe and Jensen demonstrated that mutual funds under perform market indexes and suggest that the returns were not sufficient to compensate investors for the diverse mutual fund charges. Friend, Brown, Herman and Vickers (1962) did a systematic study on mutual funds considering 152 funds with data period of 1953 to 1958 and created an index of Standard and Poor's indexes of five securities, with the elements by their representation in the mutual fund sample.

Friends and Vickers (1965) concluded that mutual funds on the whole have not performed superior to random portfolio. Friend, Marshal and Crocket (1970) in their study on mutual funds found that there is a negative correlation between fund performance and management expense measure.

John and Donald (1974) examined the relationship between the stated fund objectives and their risks-return attributes and concluded that on an average, the fund managers appeared to keep their portfolios within the stated risk.

Ippolito (1989) concludes that mutual funds on aggregate offer superior returns but they are offset by expenses and load charges. Barua, Raghunathan and Varma (1991) evaluated the performance of Master Share during the period 1987 to 1991 using Sharpe, Jensen and Treynor measures and concluded that the fund performed better than the market, but not so well as compared to the Capital Market Line.

Sethu (1999) conducted a study examining 18 open-ended growth schemes during 1985-1999 and found that majority of the funds showed negative returns and no fund exhibited any ability to time the market. Gupta (2000) has examined the investment performance of Indian mutual funds using weekly NAV data and found that the schemes showed mixed performance during 1994-1999.

Mishra and Mahmud (2002) measured mutual fund performance using lower partial moment. In this paper, measures of evaluating portfolio performance based on lower partial moment are developed. Risk from the lower partial moment is measured by taking into account only those states in which return is below a pre-specified "target rate" like risk-free rate.

Fernandes (2003) evaluated index fund implementation in India. In this paper, tracking error of index funds in

India is measured. The consistency and level of tracking errors obtained by some well-run index fund suggests that it is possible to attain low levels of tracking error under Indian conditions. At the same time, there seems to be periods where certain index funds appear to depart from the discipline of indexation.

Pendaraki, Zopounidis and Doumpous (2005) studied construction of mutual fund portfolios, developed a multi- criteria methodology and applied it to the Greek market of equity mutual funds. The methodology is based on the combination of discrete and continuous multi-criteria decision aid methods for mutual fund selection and composition. UTADIS multi-criteria decision aid method is employed in order to develop mutual fund's performance models. Goal programming model is employed to determine proportion of selected mutual funds in the final portfolios.

Zakri (2005) matched a sample of socially responsible stock mutual funds to randomly selected conventional funds of similar net assets to investigate differences in characteristics of assets held, degree of portfolio diversification and variable effects of diversification on investment performance. The study found that socially responsible funds do not differ significantly from conventional funds in terms of any of these attributes. Moreover, the effect of diversification on investment performance is not different between the two groups. Both groups underperformed the Domini 400 Social Index and S & P 500 during the study period.

Although emerging markets such as India have attracted the attention of investors all over the world, they have remained devoid of much systematic research, especially in the area of mutual funds. In an effort to plug this gap, a study by Gupta and Aggarwal (2007) sought to check the performance of mutual funds operation in India. In this regard, quarterly returns performance of all the equity- diversified mutual funds during the period from January 2002 to December 2006 was tested. Analysis was carried out with the help of Capital Asset Pricing Model (CAPM) and Fama-French Model. Amidst contrasting findings from the application of the two models, the study calls for further research and insights into the interplay between the performance determinant factor portfolios and their effect on mutual fund returns.

Since the development of the Indian Capital Market and deregulations of the economy in 1992 it has come a long way with lots of ups and downs. There have been structural changes in both primary and secondary markets since a 1992 stock market scandal. Mutual funds are key contributors to the globalization of financial markets and one of the main sources of capital flows to emerging economies. Despite their importance in emerging markets, little is known about their investment allocation and strategies.

A study by Agarwal (2007) provides an overview of mutual fund activity in emerging markets. It describes their size and asset allocation. This paper analyzes the Indian Mutual Fund Industry pricing mechanism with empirical studies on its valuation. It also analyzes data at both the fund-manager and fund-investor levels.

Guha (2008) focused on return-based style analysis of equity mutual funds in India using quadratic optimization of an asset class factor model proposed by William Sharpe. The study found the "Style Benchmarks" of each of its sample of equity funds as optimum exposure to 11 passive asset class indexes. The study also analyzed the relative performance of the funds with respect to their style benchmarks. The results of the study showed that the funds have not been able to beat their style benchmarks on the average.

Anand and Murugaiah (2008) examined the components and sources of investment performance in order to

attribute it to specific activities of Indian fund managers. They also attempted to identify a part of observed return which is due to the ability to pick up the best securities at given level of risk.

For this purpose, Fama's methodology is adopted here. The study covers the period between April 2000 and March 2022 and evaluates the performance of mutual funds based on 113 selected schemes having exposure more than 90percent of corpus to equity stocks of 25 fund houses. The empirical results reported reveal the fact that the mutual funds were not able to compensate the investors for the additional risk that they have taken by investing in the mutual funds. The study concludes that the influence of market factor was more severe during negative performance of the funds while the impact selectivity skills of fund managers was more than the other factors on the fund performance in times of generating positive return by the funds. It can also be observed from the study that selectivity, expected market risk and market return factors have shown closer correlation with the fund return.

In the Indian context, very few studies have compared the performance of the mutual fund schemes of private sector and public sector which this present work has attempted to study

Objective of the study-

Indian mutual fund industry is featured by a plethora of mutual fund schemes consisting of varying portfolio mix, investment objectives and expertise of professional fund management. For the small investor, choosing a suitable one is therefore a complex decision. This present study has the objective of finding out the necessary facts regarding performance of selected growth-oriented and open-ended schemes, which can benefit the investors and fund managers. The specific objectives of the study are:

- i) To measure the return earned by the sample mutual funds schemes and compare against the market portfolio returns to distinguish the performers from the laggards.
- ii) To find out those mutual fund schemes offering the advantages of diversification, along with adequate systematic risk compared to market beta risk.
- iii) To analyze the excess return per unit of risk evidenced by mutual fund schemes belonging to public sector and private sector, and to draw comparisons.

Research methodology-

There were 19 private sector mutual fund companies and 12 public sector mutual fund companies operating in India. The study aimed at analysing the performance of open-ended mutual funds schemes which are primarily equity based. But most of these came into existence from year 2001 onwards. This study analysed mutual funds over longer period of time and thus those mutual funds having a minimum of 10 years of operation were selected. On this basis, 10 private sector mutual fund companies operating in private sector and 7 in public sector were short listed. Out of these, those which have growth-oriented open-ended schemes with continuous availability of NAV data were selected. Thus, six Private Sector Mutual Funds and three public sector Mutual funds, when combined accounted for 23 Open-ended Growth-Oriented (equity-based) Mutual Fund Schemes (see Table1 in Appendix). An open-end fund is one that is available for subscription all through the year. These do not have a fixed maturity. Investors can conveniently buy and sell units at Net Asset Value (NAV) related prices.

The various measures of return / risk and portfolio used in the present study are presents below: 1-1. Return-

The return are computed on the basis of the NAV of the different schemes and return in the market index are calculated on the basis of NSE Nifty on the respective data.

The return from a Mutual fund scheme (R_{st}) at time t , given in equation-1, is so follows:

$$R_{st} = \frac{NAV_t - NAV_{(t-1)}}{NAV_{(t-1)}}$$

Where NAV_t and NAV_{t-1} are not assets value for time period t and $t-1$, respectively.

The mean return of the mutual fund scheme (R_{mt}) over a period of time, given in above equation is as follows:

$$R = \frac{\sum_{t=1}^n rst}{n}$$

Where rst is the return from a mutual fund scheme at time t and n is the total number of time period studied.

The return on the market (representative by a stock index) at time t , given in equation is as follows:

$$R_{mt} = \frac{I_t - I_{t-1}}{I_{t-1}}$$

Where I_t and I_{t-1} are the value of a benchmark stock market index at period t and $t-1$ respectively.

In our case, we have taken the NSE Nifty as the benchmark stock index representing the broad market.

The mean return of the market portfolio (R_{mt}) over a period of time, given in above equation is as follows:

$$R_m = \frac{\sum_{t=1}^n R_{mt}}{n}$$

Where r_{mt} is the return from a stock market index (for our case, NSE Nifty) at time t and n is the total number of time period studied.

Jensen Alpha.

The Jensen alpha measure is the intercept form the Sharpe-Litner CAPM regression of portfolio excess returns on the market portfolio excess returns over the sample period. Jensen's alpha is the arithmetic difference of the portfolio's return from the return of a portfolio on the securities market line with the same beta. Jensen defines his measure of portfolio performance as the difference between the actual returns on a portfolio in any particular holding period and the expected returns on that portfolio conditional on the risk-free rate, its level of "systematic risk", and the actual returns on the market portfolio. Jensen's Alpha measure is given by the Equation-7 as shown below.

$$R_{Pt} - R_{ft} = R_{ft} + \text{Beta}_p(R_{Mt} - R_{ft}) + e$$

where R_{Pt} is the mutual fund portfolio return in time period t , R_{ft} is the risk-free return in time period t , R_{Mt} is the return on the market portfolio in time period t and e is the error term or residual value.

Findings and Discussion-

1. Return Earned by schemes-

The second and third column of Table given below depicts the return earned by the mutual fund schemes as against the return on the stock market index for the period since inception date of the mutual fund scheme till March 2009. Using Equation 1 and Equation- 3, return for the individual mutual fund scheme and the market has been calculated using NAV and daily index value (like NSE Nifty), respectively.

It is observed that all the 3 schemes of Franklin Templeton i.e., Balanced, Blue chip and Prima Plus among the private sector, and the 3 schemes of UTI i.e., Dynamic Equity, India Advantage Equity and Money Market among Public sector were the highest return- earning schemes as against corresponding market returns witnessing returns in range of 0.33 percent to 0.47 percent and 0 .17 percent to 0.29 percent respectively. Negative returns were observed in 3 schemes namely, Birla- Gilt-plus Liquid, LIC – Equity and LIC – Index Sensex which also failed to beat the market and thus were the worst performers. Out of the 23 schemes, 15 schemes (65 percent) had mean returns above their corresponding market returns which is a fairly good indicator of mutual fund performance. Only LIC schemes showed poor performance, while rest had average returns.

Name of Scheme	Scheme	Market	<i>Beta</i>	<i>R</i> ²
Birla Sunlife - Gilt-plus Liquid	Return	Return	1.0323	0.325
Birla Sunlife – Asset Allocation	-.0021	-.0017		
Aggressive	.0007	.0009	0.8142	0.431
Deutsche – Dynamic Equity Reg.				
	.014	.0011	0.7911	0.493
DSP Merrill - Balanced	.0010	.0007	0.9827	0.662
DSP Merrill – India TIGER Fund				
DSP Merrill – Top 100 Equity	.0037	.0021	0.8814	0.678
	.0019	.0013	0.8927	0.754
Franklin Templeton – Prima Plus	.0033	.0017	0.9913	0.692
	.0047	.0016	0.9421	0.714
HDFC – Gilt Short Term	.0041	.0011	0.8132	0.729

Prudential ICICI – Balanced	.0005	.0016	0.9192	0.330
Prudential ICICI – Gilt Treasury	.0004	.0001	0.8929	0.417
SBI – Magnum Index	.0005	.0003	0.7947	0.465
SBI – Magnum Balanced				
SBI - Magnum Gilt	.0009	.0008	0.9245	0.786
UTI – Dynamic Equity	.0031	.0020	0.8133	0.610
UTI- India Advantage Equity	.0021	.0014	0.8428	0.625

PRIVATE MUTUAL FUND	PUBLIC MUTUAL FUND
Birla Sunlife (2 scheme)	LIC (3 scheme)
Deutsche (2 scheme) DSP merill	
lynch (3 scheme)	SBI (3 scheme)
Franklin templeton (3 scheme)HDFC (2 scheme)	UTI (3 scheme)
Prudential ICICI (2 scheme)	
6MFs (14 Scheme)	

Overall Performance of the Selected Mutual Funds

Mutual Fund Scheme		Return	Beta (Risk)	Sharpe Ratio	Treynor Ratio	Jensen Alpha	R ²
Private Sector	Birla Sunlife	Poor	High	+ ve Under-performer	+ ve Under-performer	+ ve Very Low	Very Low
	Deutsche	Moderate	Low	+ve Over-Performer	+ ve Over-Performer	- ve Moderate	Low
	DSP Merrill Lynch	Good	High	- ve Under-performer	- ve Under-performer	+ ve Relatively High	High
	Franklin Templeton	Excellent	High	- ve Over-Performer	- ve Over-Performer	+ ve Low	High
	HDFC	Poor	Low	+ ve Under-performer	+ ve Over-Performer	- ve Mixed	Low
	Prudential ICICI	Moderate	Low	- ve Over-Performer	- ve Over-Performer	+ ve Very Low	Low
Public Sector	LIC	Poor	High	- ve Under-performer	- ve Under-performer	- ve Low	Very Low
	SBI	Good	Low	+ ve Over-Performer	+ ve Over-Performer	+ ve Relatively High	High
	UTI	Excellent	High	+ ve Over-Performer	+ ve Over-Performer	+ ve Relatively High	High

Conclusion-

The performance of the mutual funds classified as private sector and public sector in summarized form showing various parameters of performance. On the basis of returns, UTI mutual fund schemes and Franklin Templeton schemes have performed excellently in public and private sectors respectively. Much of this is due to these schemes having portfolio of equities with high risk (high beta risk). On the other hand, LIC, Birla SunLife and HDFC schemes have failed to satisfy their investors in terms of returns which was in spite of taking higher risk.

On the basis of Sharpe ratio, Deutsche, Franklin Templeton, Prudential ICICI (in private sector) and SBI and UTI (in public sector) mutual funds have out-performed the market portfolio with positive values. These funds (except Deutsche and Prudential ICICI) are also observed to have high R² values (Coefficient of determination) indicating better diversification of the fund portfolio. The remaining 4 mutual funds witnessed negative values and also had Sharpe ratio below that of the market. The conclusion remained more or less similar with regard to Treynor measure except HDFC mutual fund turning out to beat the market as out-

performer with positive values. Jensen alpha measure had mixed responses in private sector funds, while in public sector only UTI and SBI managed relatively higher alpha values indicating better performance.

The overall analysis finds Franklin Templeton and UTI being the best performers, and Birla SunLife, HDFC and LIC mutual funds showing poor below-average performance when measured against the risk-return relationship models and measures. One of the lacunas of this study is that only open-ended growth-oriented schemes have been analyzed for the sample mutual funds. Future research may attempt to investigate and compare the close-ended schemes with open-ended and also the debt schemes with equity based growth oriented schemes.

The broad implications of the findings are that the equity based open-ended mutual fund schemes of Franklin Templeton and UTI provide relatively superior returns to the investors. The small investors are well-advised to analyse the return and risk parameters of the mutual funds, over longer period of time, before their investment decisions. Although mutual funds are instruments of diversified investments, a prudent choice between the many available mutual fund schemes will go a long way in generating wealth for the investors. Further, in times of high stock market volatility, mutual funds are the best source of investments with assured and adequate returns provided the selection of the mutual funds is in the right direction.

Reference-

1. Agrawal, D. (2007). Measuring Performance of Indian Mutual Funds.
2. Anand, S. and Murugaiah, V. (2006). Analysis of Components of Investment Performance - An Empirical Study of Mutual Funds in India.
3. Barua, S. K., Raghunathan, V. and Verma, J. R. (1991). Master Share: A Bonanza for Large Investors Fernandes, K. (2003). Evaluating index fund implementation in India.
4. Guha, S. (2008). Performance of Indian Equity Mutual Funds vis- a-vis their Style Benchmarks.
5. Gupta, A. (2000). Market Timing Abilities of Indian Mutual Fund Managers: An Empirical Study
6. Gupta, M. and Aggarwal, N. (2007). Performance of Mutual Funds in India: An Empirical Study. Ippolito,
7. R. A. (1993). On Studies of Mutual Fund Performance: