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A Comparative Analysis of Financial Performance of Selected Mutual Funds Schemes Dedicated to Post Retirement Needs

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ABSTRACT

The present paper is an attempt to compare and rank the financial performance of open-ended, growth-oriented mutual fund schemes dedicated to post retirement financial needs. The selected fund was Franklin India Pension Fund, UTI Retirement Benefit Pension Fund, Reliance Retirement Fund, and HDFC Retirement Savings Fund. The daily closing NAVs of the selected schemes for evaluation was collected from the period November 2013 to October 2018. NIFTY FIFTY has been used for market portfolio. The historical financial performance is evaluated on the basis of CAGR, Average Returns, Sharpe Index, Treynor Index, and Jensen's Index. The evaluation of the fund's financial performance will be useful for investors to take better investment decisions. The evaluation revealed that in the last five year comparison Franklin Indian Pension Fund have performed better over other selected funds. In the last four year's financial performance comparison UTI Retirement Benefit Plan have performed better over other selected funds. If we consider last three year financial performance as per Sharpe and Treynor Ratio the UTI Retirement Benefit Plan has outperformed the other selected funds and as per Jensen Index Reliance Retirement Fund have outperformed the other selected funds. To consider the last two year financial performance comparison as per Sharpe Ratio Reliance Retirement Fund has outperformed the other selected funds and as per Treynor and Jensen Ratio HDFC Retirement Saving Funds have outperformed the other selected funds. To consider the last year financial performance comparison all the selected funds including benchmark index Nifty have generated negative returns.

Keywords: Mutual funds, Sharpe Index, Treynor Index, Jensen Index, CAGR, Average Returns, Beta, Standard Deviation, Variance and Covariance

Introduction

Based on the report of OASIS (Old age social and income security), a countrywide project that the Indian Government initiated to observe policies related to old age income security in India, the government initiated and decided to replace the then defined benefit pension system (traditional government pension) to defined contribution pension system (linked to investment in NPS) with respect to all new joinees of Central/State Government except defence sectors. This shift of government has forced people to seek different risk free investment avenues. For this very purpose some of the asset management companies have come up with the special mutual funds schemes dedicatedly to cater the post retirement needs. The dedicated mutual fund for post retirement offers not only attractive investment for the government employees as well as for the general financially awaked people also.

Why Mutual Fund?

It will be a good call to start investing for your post retirement financial needs early in your working life. If you start investing a small amount regularly, you would be able to secure a very large amount of corpus over a long period. The compounding effect of investment would help you to add exponential growth in your corpus.

Here are some of the explanations to think about mutual funds for investments towards post retirement financial planning:

Low cost: Mutual funds investments do not require higher initial investments. Most mutual funds indifferent to any schemes of mutual funds need an initial investment of just around Rs. 1,000 per month. However, one should take proper research or advice to choose a fund that has limited fees and charges such as entry and exit load expenses, fund management charges, etc.

Beat the inflation: As you get older, inflation may conjointly rise, by the time you will be sixty years the cost of living will be higher. To beat this inflation you need to invest in such a financial instrument which will grow more than the inflation rates. Growth Mutual Funds dedicated to post retirement needs are ideal for this.

Liquidity: The unique feature of mutual fund open ended schemes can be liquidated any time unlike PPF accounts. Although it is advisable if your investment is towards post retirement financial needs one should invest for longer period of time, such schemes allow exit from investment

Mutual fund schemes provide excellent opportunities to invest a tiny amount which will ultimately grow like anything in the period of 15 to 20 years of investments. Such systematic investment in mutual funds particularly schemes dedicated to retirement may bring effective returns to the investors. Present research paper is an endeavour to select best mutual fund for post retirement financial needs. Mutual fund Industry in India was introduced in 1963 in the form of Unit Trust of India. The mutual fund industries have seen a lot of unexpected and quick changes in the recent times. According to the association of Mutual Funds of India (AMFI) the investment in SIPs in the month of June and July 2018 reached to Rs. 7554 crore which accounts almost 78% of the total inflow of Mutual Funds. Therefore, due to the transformed environment it becomes important to explore the mutual fund performance. The present paper investigates the performance of open-ended mutual funds scheme, dedicatedly to cater the post retirement financial needs. Open-ended mutual fund schemes are those which don't have a fixed maturity though levied exit load, not listed in the stock exchange and these schemes offer new unit for sale and ready to buy any time. The success of any scheme depends upon the competence of the management and its soundness.

Literature Review

Ojha, S. C. (2017) the most important objective of this paper was, to evaluate the performance of equity diversified mutual funds of India. The analysis was based on Average Return, Sharpe Ratio, Treynor Ratio, Standard Deviation, Beta and Coefficient of Determination (R2). The NAVs was taken from official websites of mutual fund schemes and from amfiindia.com. The data was taken for the one year only. The majority of the selected funds for study have performed better than benchmark index under Sharpe Ratio as well as Treynor Ratio.

Soni, S., Bankapue, D., & Bhutada, M. (2015) the study revealed that, Kotak Mutual Fund schemes have given negative returns in Large Cap Equity schemes and HDFC Mutual Fund schemes have given negative returns in Mid Cap Equity schemes while both the asset management companies' schemes were very well managed in debt mutual funds schemes.

Rajput and Singh (2014) They have taken a sample of 120 diverse open-ended mutual fund schemes from different public sector financial institutions of India. They concluded that tax saving funds performed well in market though found high variations in risk and return. Beta and standard deviations were higher in tax saving and equity schemes whereas standard deviation was moderate under balanced and low in income schemes. Tax saving fund had performed better when compared with market returns followed by balanced fund and equity fund.

Pala and Chandnib (2014) they examined the financial performance of the some debt mutual fund and income scheme, on the calculation of their daily NAVs. from the period Oct 2007 to Oct 2012 the study found that, the HDFC Mid Cap Opportunity Fund have performed better followed by, Birla Sun Life MNC Fund.

Annapoorna and Gupta (2013) the study examined the financial performance of mutual fund schemes and they were compared by the returns with the SBI domestic term deposit rates. The study concluded that the most of the selected mutual fund schemes have failed to meet the returns of SBI domestic term deposit schemes.

Rasheed Haroon, Qadeer Abdul (2012) in their research paper they have investigated the financial performance of survivorship bias of twenty five open ended mutual fund schemes in Pakistan and they have also investigate the managers ability of stock selection and also considered the stock diversification.

Kale and Panchapagesan (2012) in their research paper they have examined the penetration of mutual funds industry in Indian retail stock market and discovered that lack of weak regulatory environment and governance are the prominent reasons behind that. Another reason which may attribute to the poor participation of retail is the recent performance of the mutual funds. The study was on primary and secondary data.

Prajapati and Patel(2012) in their research paper they have evaluated the financial performance of different diversified equity mutual funds in India, from the period 2007 to 2011 and they found, all schemes of the selected mutual funds has generated positive returns and calculate that the best performer were HDFC and Reliance mutual fund. Traditional ratios like Sharpe and Treynor were used to calculate the financial performance of the selected mutual fund.

Treynor (1965), Sharpe (1966) and Jensen (1968)' Treynor, Sharpe and Jenson derived the ratios to evaluate the performance of the portfolio with respect to systematic and internal risks. Risk has been identified with the help of standard deviation and Beta. They used capital asset pricing model to compare the risk adjusted returns of the funds with the return of the benchmark market index returns. They analysed the returns and stated that higher the value of the ratios tells the better performance over benchmark index returns.

Statement of the Research Problem

In the recent times due to change in the government policy various attractive schemes for post retirement needs have been introduced therefore this study has undertaken to do a comparative evaluation of the performance of such retirement mutual funds schemes particularly of four asset management companies.

OBJECTIVES OF THE STUDY

- To compare the performance of selected Mutual fund schemes dedicatedly to cater post retirement financial needs with the benchmark Index NIFTY 50.
- To evaluate the Performance & rank/rate the funds on the basis of Sharpe's, Treynor's & Jensen's ratios.

Research Methodology

The study makes a comprehensive evaluation of Mutual Fund Scheme dedicated to retirement savings of 4 funds over a period of 5 years (November 2013 to October 2018).The required data has been collected from the official web site of the mutual funds and the risk is calculated on the basis of daily closing NAV of each concerned fund. Further, NIFTY50 has been taken as the benchmark index and its historical data is used for computation market return. Average Yield on 10 yr. govt. bond has been taken as the risk free rate of return the reference rate has been taken from the data published by RBI.

Tools for the Analysis

The following statistical tools and parameters will be used to measure the various types of risks of the selected mutual funds are as under: Return (R_p), Variance (σ^2), Standard Deviation (σ) and Beta (β). For the assessment of the financial performance of the selected mutual funds and ranking on the basis of the risk and returns the following ratios will be calculated in this study: Sharpe Index, Treynor Index and Jensen Index.

Return of the Mutual Fund (Return of the Portfolio) i.e R_p

On the basis of the following formula return of the various portfolios has been collected

$$Rp = \frac{\text{NAV } t - \text{NAV } t-1}{\text{NAV } t-1}$$

Where t is the reference time

Sharpe Index

Sharpe Index is used to calculate a return on investment compared to its risk. Risk is calculated with the help of statistical parameter standard deviation. The formula will be used to calculate the Sharpe Index: Sharpe Index = [(Return from the Fund - Risk-free Rate of Return) /Total Risk of Fund] i.e. [(Rp-Rf)/σ].

Treynor Index

Treynor Index helps to measure the fund's performance on the basis of systematic risk. The systematic risk is calculated with the help of Beta. Beta measures the overall market risk of the funds. The formula of the Beta is: $\beta = \text{Cov}(R_p, R_m)/\text{Var}(R_m)$. The formula of the Treynor Index: Treynor Index =[(Return from the Fund - Risk-free Rate of Return)/Beta] i.e. [(Rp-Rf) / βp].

Jensen Index

Jensen index or alpha measures the performance of fund on the basis of average returns over and above or below the returns predicted by the capital asset pricing model. The formula of the Jensen Index: Index = Return from the Fund – [Risk-free Rate of Return + Beta (Return of the market - Risk-free Rate of Return)] i.e. Rp-[Rf + β(Rm-Rf)].

Limitations of the study

One major limitation of the study is that the present research work has selected only mutual fund schemes dedicated to retirement saving schemes. However, there are other saving schemes of mutual funds offered by various AMCs which have not been taken into account for the study. Secondly the inception date of the selected mutual fund is not the same therefore the comparison is done according to the availability of the data.

Data Analysis & Interpretation

The core of the research started with the collection of raw data w.r.t NAV & historical data for the NIFTY 50 index for the period from November 2013 to October 2018.

The funds selected for the purpose of the research are as laid below;

- Franklin India Pension Fund,
- UTI Retirement Benefit Pension Fund,
- Reliance Retirement Fund,
- and HDFC Retirement Savings Fund

The NAVs of the above mutual funds is collected from the growth option.

RESULTS AND DISCUSSION:

To compare the performance of mutual fund schemes dedicated to retirement saving schemes with benchmark index S&P CNX Nifty 50, risks and returns of funds are calculated in the following manner. The inception date of the Reliance Retirement Fund was Jan 2015 and HDFC Retirement Savings Fund was Feb 2016 hence these funds were not compared for the year before 2015 and 2016 respectively.

Table 1 Yearly Average Returns for the last Five Years

Year	S&P CNX Nifty 50	UTI Retirement Benefit Pension Fund	Franklin India Pension Fund,	Reliance Retirement Fund	HDFC Retirement Savings Fund
2017-18	-0.5163%	-1.45%	-0.97%	-8.92%	-5.48%
2016-17	19.81%	13.05%	8.18%	23.91%	22.28%
2015-16	7.29%	12.03%	10.99%	7.92%	NA
2014-15	-3.10%	6.78%	11.34%	NA	NA
2013-14	31.95%	11.48%	27.41%	NA	NA

The above table shows that in the year 2017-18 all the selected mutual funds and benchmark Nifty 50 have generated negative returns. Among all the mutual funds Reliance Retirement Fund have generated most negative returns followed by HDFC Retirement savings Fund, UTI Retirement Benefit Pension fund and least negative returns by Franklin India Pension Fund. In the year 2016-17 Reliance Retirement Fund and HDFC Retirement Savings Fund outperformed the market returns. The Reliance and HDFC fund generated 23.91% and 22.28% respectively whereas Nifty generated only 19.81% in the given year. The UTI and Franklin Fund were managed to generate 13.05% and 8.18 % only. In the year 2015-16 UTI, Franklin and Reliance outshines the returns of Nifty (7.29%) by giving returns of 12.03%, 10.99% and 7.2% respectively. In the year 2014-15 where Nifty has given negative returns, Franklin gave 11.34% and UTI have given 6.78%. In the year 2013-14 Nifty has given higher returns 31.95% and Franklin 27.41% and UTI 11.48% lower than the market returns.

Table 2 Average Returns of the Funds from Last Five years to One Year

Year	S&P CNX Nifty 50	UTI Retirement Benefit Pension Fund	Franklin India Pension Fund,	Reliance Retirement Fund	HDFC Retirement Savings Fund
Last Five Years (i.e. 2013-2018)	11.08%	8.37%	11.38%	NA	NA
Last Four Years 2014-2018	5.87%	7.60%	7.38%	NA	NA
Last Three Years 2015-2018	8.86%	7.87%	6.06%	7.63%	NA
Last Two Years 2016-2018	9.64%	5.79%	3.60%	7.49%	8.39%
Last One Year 2017-2018	-0.51%	-1.45%	-0.97%	-8.92%	-5.48%

The above table depicts that in last five years from 2013 to 2018 Franklin India Pension Fund (11.38%) have given better average returns as compare to market returns Nifty (11.08%) and UTI Retirement Pension Fund (8.37%). From last four year i.e. from 2014 to 2018 UTI Retirement Benefit Pension Fund have given better average returns as compare to Franklin India Retirement Fund (7.38%) and Nifty (5.87%). From last three years i.e. from 2015 to 2018 Nifty (8.86%) have generated more returns followed by UTI Retirement Benefit Pension Fund (7.87%), Reliance Retirement Fund (7.63%) and Franklin India Retirement Fund (6.06%). From last two years i.e. from 2016-18 Nifty (9.64%) have generated more returns followed by, HDFC Retirement Savings Fund (8.39%), Reliance Retirement Fund (7.49%), UTI Retirement Benefit Pension Fund (5.79%) and Franklin India Retirement Fund (3.6%). And from last year that is from year 2017-18 all the funds including benchmark index have generated negative returns. In the given year among all the funds the worst return was generated by Reliance Retirement Fund (-8.92%) followed by HDFC Retirement Savings Fund (-5.48%), UTI Retirement Benefit Pension Fund (-1.45%), Franklin India Retirement Fund (-0.97%) and Nifty (-0.51%).

Table 3 CAGR of the Funds over the last five years

Year	S&P CNX Nifty 50	UTI Retirement Benefit Pension Fund	Franklin India Pension Fund,	Reliance Retirement Fund	HDFC Retirement Savings Fund
Last Five Years (i.e. 2013-2018)	10.49%	8.41%	11.20%	NA	NA
Last Four Years 2014-2018	5.69%	7.57%	7.41%	NA	NA
Last Three Years 2015-2018	8.86%	7.80%	6.05%	7.14%	NA
Last Two Years 2016-2018	9.73%	5.69%	3.69%	6.78%	7.84%
Last One Year 2017-2018	-0.51%	-1.45%	-0.97%	-8.92%	-5.48%

The compounded annual growth rate (CAGR) helps to gauge the annual compounded returns of the funds over the years. From the calculation of CAGAR of last five years Franklin India Retirement Fund has given 11.20% returns annually and has beaten the returns of NIFTY (10.49%) where as UTI Retirement Benefit Pension Fund managed to give 8.41% annually from last five years. The CAGR of last four years UTI Retirement Benefit Pension Fund has given 7.57% annual returns and Franklin India Pension Fund has given 7.41% annually and both the funds were managed to beat the returns of the NIFTY (5.69%) returns. If we compare the returns of CAGR of last three years and two years NIFTY has given annual returns of 8.86% and 9.73% respectively which is more than the annual returns of Reliance Retirement Fund 7.14% and 6.78%, UTI Retirement Benefit Pension Fund 7.80% and 5.69% and Franklin India Fund 6.05% and 3.69%. If we compare the CAGR of last year all the funds including benchmark index have generated negative returns. In the given year among all the funds, worst return was generated by Reliance Retirement Fund (-8.92%) followed by HDFC Retirement Savings Fund (-5.48%), UTI Retirement Benefit Pension Fund (-1.45%), Franklin India Retirement Fund (-0.97%) and Nifty (-0.51%).

Comparison and Analysis of Funds Financial Performance and Raking of the Funds

The Sharpe ratio measures the performance of the funds on the basis of excess returns per extra unit of risk. Risk is measured with the help of standard deviation. A high positive Sharpe Ratio indicates that the fund have

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given the superior risk adjusted returns over the given period of time. Low and negative Sharpe Ratio shows that fund have given unfavourable risk adjusted returns.

Treynor Ratio is a measurement of performance of the fund on basis of systematic risk i.e. Beta. It is often called reward to volatility ratio. The difference between Sharpe and Treynor Ratio lies in the use of measure of risk. Sharpe Ratio uses standard deviation to measure the returns per extra unit of total risk (i.e Standard Deviation) where as Treynor Ratio measures the returns per extra unit of market risk (i.e. Beta). A higher and positive Treynor Ratio indicates better performance and lower and negative Treynor Ratio indicated poor performance of the funds.

Jensen Ratio or often called Jensen alpha indicates that how much the portfolio return is over and above the risk adjusted market return. The higher the ratio the better risk adjusted returns have generated. Jensen's alpha is used to determine the abnormal return of a mutual fund or portfolio of securities over the risk adjusted market returns.

Basis of the Fund's Performance and Ranking

The table no 4, 5, 6, 7 and 8 will analyse the performance and gives the ranking year wise of the selected funds on the basis of Sharpe, Treynor and Jensen Ratios.

Table 4 Performance of the funds from the year 2013 to 2018

YEAR (2013-2018)	S&P CNX Nifty 50	UTI Retirement Benefit Pension Fund	Franklin India Pension Fund,	Reliance Retirement Fund	HDFC Retirement Savings Fund
Absolute Returns	64.67 %	49.71%	70.00%	NA	NA
Average Returns	11.08 %	8.37%	11.38%	NA	NA
Outperformance		2.71%	-0.30%	NA	NA
SD (Daily)	0.00851	0.00438	0.00365	NA	NA
SD (Annualized)	30.21 %	15.57%	12.98%	NA	NA
G SEC Returns	7.65%	7.65%	7.65%	7.65%	7.65%
Beta	1	0.36653	0.35361	NA	NA
Sharpe Ratio [(Rp-Rf)/Annualized SD]	0.1137	0.0466	0.2879	NA	NA
Treynor Ratio. [(Rp-Rf) / βp]	0.03436	0.0198	0.1057	NA	NA
Jensen Ratio Rp-[Rf + β(Rm-Rf)]	0	-0.0053	0.0348	NA	NA
Rank as Per Sharpe Ratio		2	1	NA	NA
Rank as Per Treynor Ratio		2	1	NA	NA
Rank as Per Jensen Ratio		2	1	NA	NA

The above table gives the ranking of the funds on the basis of the calculated ratios. If the last five year time frame (2013-18) is considered Franklin India Pension Fund has greater value of the Sharpe (0.2879), Treynor (0.1057) and Jenson (0.0348) ratio than the benchmark Index Nifty 50 Sharpe 0.1137, Treynor 0.03436 and Jenson 0 and UTI Retirement Benefit Pension Fund Sharpe 0.0466, Treynor 0.0198 and Jensen -0.0053 which shows the superior performance of Franklin India Pension Fund hence ranked no 1 and UTI Retirement Benefit Pension Fund Ranked 2.

Table 5 Performance of the funds from the year 2014 to 2018

YEAR (2014-2018)	S&P CNX Nifty 50	UTI Retirement Benefit Pension Fund	Franklin India Pension Fund,	Reliance Retirement Fund	HDFC Retirement Savings Fund
Absolute Returns	24.77%	33.8787 %	33.121%	NA	NA
Average Returns	5.87%	7.60%	7.38%	NA	NA
Outperformance		-1.7299%	-1.51%	NA	NA
SD (Daily)	0.0085	0.0036	0.0036	NA	NA
SD (Annualized)	27.02%	11.60%	11.70%	NA	NA
G SEC Returns	7.38%	7.38%	7.38%	7.38%	7.38%
Beta		0.378818	0.38342	NA	NA
Sharpe Ratio [(Rp-Rf)/Annualized SD]	-0.0558	0.0191	0.0002	NA	NA
Treynor Ratio. [(Rp-Rf) / βp]	-0.01508	0.0058	0.0001	NA	NA
Jensen Ratio Rp-[Rf + β(Rm-Rf)]	0	0.0079	-0.0008	NA	NA
Rank as Per Sharpe Ratio		1	2	NA	NA
Rank as Per Treynor Ratio		1	2	NA	NA
Rank as Per Jensen Ratio		1	2	NA	NA

The above table gives the ranking of the funds on the basis of the calculated ratios. If the last four year time frame (2014-18) is considered UTI Retirement Benefit Pension Fund has greater value of the Sharpe (0.0191), Treynor (0.0058) and Jenson (0.0079) ratio than the benchmark Index Nifty 50 (Sharpe -0.01508, Treynor -0.01508and Jenson 0 and Franklin India Pension Fund Sharpe 0.0002, Treynor 0.0001 and Jensen -0.0008 which shows the superior performance of UTI Retirement Benefit Pension Fund Ranked hence ranked no 1 and Franklin India Pension Fund 2.

Table 6 Performance of the funds from the year 2015 to 2018

YEAR (2015-2018)	S&P CNX Nifty 50	UTI Retirement Benefit Pension Fund	Franklin India Pension Fund,	Reliance Retirement Fund	HDFC Retirement Savings Fund
Absolute Returns	29.01%	25.27%	19.26%	22.98%	NA
Average Returns	8.86%	7.87%	6.06%	7.63%	NA
Outperformance		0.98%	2.80%	1.22%	NA
SD (Daily)	0.00788	0.00346	0.00330	0.00952	NA
SD (Annualized)	21.68%	9.51%	9.09%	26.18%	NA
G SEC Returns	7.23%	7.23%	7.23%	7.23%	7.23%
Beta	1	0.372783	0.36602	1.0113	NA
Sharpe Ratio [(Rp-Rf)/Annualized SD]	0.0753	0.0676	-0.1283	0.0155	NA
Treynor Ratio . [(Rp-Rf) / βp]	0.01633	0.0173	-0.0319	0.0040	NA
Jensen Ratio Rp-[Rf + β(Rm-Rf)]	0	0.0003	-0.0140	0.0158	NA
Rank as Per Sharpe Ratio		1	3	2	NA
Rank as Per Treynor Ratio		1	3	2	NA
Rank as Per Jensen Ratio		2	3	1	NA

The above table gives the ranking of the funds on the basis of the calculated ratios. If the last three year time frame (2015-18) is considered. On the basis of the Sharpe and Treynor Ratio UTI Retirement Benefit Pension Fund Ranked no 1 which shows that the fund has performed better than the Benchmark Index on the basis of risk and returns followed by Reliance Retirement Fund and Franklin India Pension Fund. On the basis of Jensen Ratio Reliance Retirement Fund ranked no 1 if we consider the risk adjusted returns followed by UTI Retirement Benefit Pension Fund and Franklin India Pension Fund.

Table 7 Performance of the funds from the year 2016 to 2018

YEAR (2016-2018)	S&P CNX Nifty 50	UTI Retirement Benefit Pension Fund	Franklin India Pension Fund,	Reliance Retirement Fund	HDFC Retirement Savings Fund
Absolute Returns	20.40 %	11.70%	7.51%	14.01%	16.29%
Average Returns	9.64%	5.79%	3.60%	7.49%	8.39%
Outperformance		3.85%	6.05%	2.15%	1.25%
SD (Daily)	0.00717	0.00335	0.00309	0.00946	0.006846
SD (Annualized)	16.10 %	7.52%	6.94%	21.24%	15.36%
G SEC Returns	7.13%	7.13%	7.13%	7.13%	7.13%
Beta	1	0.373985	0.363769	1.03064	0.843726
Sharpe Ratio [(Rp-Rf)/Annualized SD]	0.1563	-0.1771	-0.5082	0.0172	0.0823
Treynor Ratio. [(Rp-Rf) / βp]	0.0251	-0.0356	-0.0970	0.0035	0.0150
Jensen Ratio Rp-[Rf + β(Rm-Rf)]	0	-0.022742	-0.03042	0.039997	0.009569
Rank as Per Sharpe Ratio		3	4	1	2
Rank as Per Treynor Ratio		3	4	2	1
Rank as Per Jensen Ratio		3	4	2	1

The above table gives the ranking of the funds on the basis of the calculated ratios. If the last two year time frame (2016-18) is considered. On the basis of the Sharpe Ratio Reliance Retirement Fund Ranked no 1 which shows that the fund has performed better than the Benchmark Index on the basis of risk and returns followed by HDFC Retirement Savings Fund, UTI Retirement Benefit Pension Fund and Franklin India Pension Fund. On the basis of Treynor and Jensen Ratio HDFC Retirement Savings Fund ranked 1 which shows that HDFC Retirement Fund has given more risk adjusted returns followed by Reliance Retirement Fund, UTI Retirement Benefit Pension Fund and Franklin India Pension Fund.

Table 8 Performance of the funds from the year 2017 to 2018

YEAR (2017-2018)	S&P CNX Nifty 50	UTI Retireme nt Benefit Pension Fund	Franklin India Pension Fund,	Reliance Retireme nt Fund	HDFC Retireme nt Savings Fund
Absolute Returns	-0.51%	-1.45%	-0.97%	-8.9259%	-5.4892%
Average Returns	-0.51%	-1.45%	-0.97%	-8.9259%	-5.4892%
Outperformance		0.94%	0.45%	8.4096%	4.9730%
SD (Daily)	0.00769	0.003550	0.003178	0.00834	0.00692
SD (Annualized)	12.21%	5.63%	5.04%	13.24%	10.98%
G SEC Returns	7.63%	7.63%	7.63%	7.63%	7.63%
Beta	1	0.397929	0.368430	1.012018	0.788260
Sharpe Ratio [(Rp-Rf)/Annualized SD]	-0.6667	-1.6126	-1.7047	-1.2497	-1.1938
Treynor Ratio. [(Rp-Rf) / βp]	-0.0814	-0.2284	-0.2334	-0.1636	-0.1664
Jensen Ratio Rp-[Rf + β(Rm-Rf)]	0	-0.058467	-0.05251	-0.078522	-0.000688
Rank as Per Sharpe Ratio		3	4	2	1
Rank as Per Treynor Ratio		3	4	1	2
Rank as Per Jensen Ratio		3	2	4	1

The above table gives the ranking of the funds on the basis of the calculated ratios. If the last one year time frame (2017-18) is considered. On the basis of the Sharpe Ratio HDFC Retirement Fund Ranked no 1 which shows that the fund has performed better than the Benchmark Index on the basis of risk and returns followed by Reliance Retirement Fund, UTI Retirement Benefit Pension Fund and Franklin India Pension Fund. On the basis of Treynor Ratio Reliance Retirement Fund ranked 1 which shows that has given more risk adjusted returns followed by HDFC Retirement Savings Fund UTI Retirement Benefit Pension Fund and Franklin India Pension Fund. On the basis of Jensen Ratio HDFC Retirement Savings Fund ranked 1 which shows that has given more risk adjusted returns followed by Franklin India Pension Fund UTI Retirement Benefit Pension Fund and Reliance Retirement Fund.

Conclusion

The present study has compared the four mutual funds dedicated to retirement savings. Summary of the results are presented in the above different tables. In India, there are very few mutual fund schemes that are available to general investors for retirement savings. The present study provides some insights on selected retirement oriented mutual fund performance so as to support the common investors in taking the reasonable investment decisions for allocating their savings in correct mutual fund schemes. The data used in the study comprises of monthly NAVs for the selected schemes. To compare the performance of the funds the study utilized benchmark portfolio NIFTY FIFTY for the schemes. The performance of sample retirement savings oriented mutual fund schemes has been calculated and evaluated in terms of return and risk analysis, and risk adjusted performance measures such as Sharpe ratio, Treynor ratio and Jensen Ratio. In a nut shell, the performance of selected mutual fund in terms of Average returns, Absolute returns, CAGR and Ranking on the basis of selected ratios: if we consider the last five year performance i.e. 2013-2018 the Franklin India Pension Fund have outperformed the NIFTY FIFTY and UTI Retirement Benefit Plan. The data of other selected fund viz Reliance Retirement Fund and HDFC Retirement Saving Funds was not available because their inception date is later in the year. If we consider the last four year performance i.e. 2014-2018 the UTI Retirement Benefit Plan has outperformed the NIFTY FIFTY and Franklin India Pension Fund. The data of other selected fund viz Reliance Retirement Fund and HDFC Retirement Saving Funds was not available because their inception date is later in the year. If we consider the last four year performance i.e. 2015-2018 as per Sharpe and Treynor Ratio the UTI Retirement Benefit Plan has outperformed the NIFTY FIFTY, Reliance Retirement Fund and Franklin India Pension Fund and as per Jensen Ratio Reliance Retirement Fund have generated better risk adjusted returns over NIFTY FIFTY and UTI Retirement Benefit Plan. The data of other selected fund viz HDFC Retirement Saving Funds was not available because their inception date is later in the year. If we consider the last two year performance i.e. 2016-2018 as per Sharpe Ratio Reliance Retirement Fund has outperformed the HDFC Retirement Saving Funds, UTI Retirement Benefit Plan and Franklin India Pension Fund and as per Treynor and Jensen Ratio HDFC Retirement Saving Funds have outperformed the Reliance Retirement Fund and UTI Retirement Benefit Plan and Franklin India Pension Fund. If we consider the last one year performance i.e. 2017-2018 all the selected funds performance was not up to the mark as all the values of the ratios came to negative which shows that the returns of the funds are below the performance of the benchmark returns.

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