Performance of Monthly Income Scheme in Mutual Fund Industry in India

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Abstract

Mutual funds are an integral part of the stock market. It has become the investment avenue for large number of investors in the past 10 years. Also the stock market volatility is high in these years. Thus in order to analyze the performance of top funds under importance schemes, a research has been done. Ten mutual funds in the income fund category were selected based on their returns. The main focus of this research is to find the risk and return features and study the performance of the funds and to compare it with the market return. The research is limited NAV data for ten income funds available for (2005-2015). The findings will be useful to bring out insight into investment avenues.

Index terms— mutual fund, risk and return.

1 I. Introduction

here are a number of investment opportunities available to an investor. Each of these investments has its own risk and return features. An investor must learn to analyze and measure the risk and return of the portfolio. The mutual fund industry plays a significant role in the development of the economy. Its buoyant growth leads to lower intermediate costs, more efficient financial markets, and increased vibrancy of the capital markets and higher local ownership of financial assets. If retail investment is directed through the mutual fund route, it will lead to greater wealth creation in the long run. Thus, the industry can be one of the causative factors for a healthy economy. The Indian mutual funds business is expected to grow significantly in the coming years due to a high degree of transparency and disclosure standards comparable to anywhere in the world, through there are many challenges that need to be addressed to increase net mobilization of funds in the sector.

2 II. Literature Review

Michael C. Jensen, Harvard Business School **??**2002), in his paper a risk adjusted measure of portfolio performance that estimates how much a manger's forecasting ability contributes to the funds return. The measure is based on the theory of the pricing of Capital assets by **??**harpe (1964) **??**intner (1965) and Treynor. Timotej Jagric, Boris Podobnik, Sebastjan, Strasek and Vita Jagric (2007), studied the mutual fund industry and apply various test to evaluate the Performance capacity of mutual funds. They used performance measure to evaluate funds and also they rank them according to the results. Arnod L. Redman, N.S. Gullet and Herman Manakyan **??**2000), examines the risk adjusted returns using Sharpe Index, Treynors Index, Jensens Alpha for five portfolios of International mutual funds and for three time period: **??**985-1994, 1985-1989 and 1990-94. The bench mark for comparison was the US market provided by the Vanquand Index 500 mutual funds and a portfolio of funds that invest solely in US stocks. J. Cal, KC Chan and T. Yamada, 'The performance of Japanese mutual funds', analyze the performance of Japanese open-type stock mutual funds for the 1981-1992 period. David Blake (2003), reviewed the extensive empirical literature on mutual fund performance and also conducted an empirical analysis of the performance of a large sample of UK unit trusts. S.P. Kothari, Jerold B, Warner (2005), indicates standard model fund performance measures, using simulated funds whose characteristics mimic actual funds. Shanmugham (2000)

43 conducted a survey of 201 individual investors to study the information sourcing by investors, their perceptions
44 of various investment strategy dimensions and the factors motivating share investment decisions, and reports
45 that among the various factors, psychological and sociological factors dominated the economic factors in share
46 investment decisions. Madhusudhan V Jambodekar (1996) conducted a study to assess the awareness of MFs
47 among investors, to identify the information sources influencing the buying decision and the factors influencing the
48 choice of a particular fund. The study reveals among other things that Income Schemes and Open Ended Schemes
49 are more preferred than Growth Schemes and Close Ended Schemes during the then prevalent market conditions.
50 Investors look for safety of Principal, Liquidity and Capital appreciation in the order of importance; Newspapers
51 and Magazines are the first source of information through which investors get to know about MFs/Schemes and
52 investor service is a major differentiating factor in the selection of Mutual Fund Schemes. Sujit Sikidar and Amrit
53 Pal Singh (1996) carried out a survey with an objective to understand the behavioural aspects of the investors of
54 the North Eastern region towards equity and mutual funds investment portfolio. The survey revealed that the
55 salaried and self-employed formed the major investors in mutual fund primarily due to tax concessions. UTI and
56 SBI schemes were popular in that part of the country then and other funds had not proved to be a big hit during
57 the time when survey was done. Syama Sunder (1998) conducted a survey to get an insight into the mutual fund
58 operations of private institutions with special reference to Kothari Pioneer. The survey revealed that awareness
59 about Mutual Fund concept was poor during that time in small cities like Visakhapatnam. Agents play a vital
60 role in spreading the Mutual Fund culture; open-end schemes were much preferred then; age and income are
61 the two important determinants in the selection of the fund/scheme; brand image and return are the prime
62 considerations while investing in any Mutual Fund. In India, one of the earliest attempts was made by 64 Pacific
63 Bus. Anjan Chakarabarti and Harsh Rungta (2000) stressed the importance of brand effect in determining the
64 competitive position of the AMCs. Their study reveals that brand image factor, though cannot be easily captured
65 by computable performance measures, influences the investor's perception and hence his fund/ scheme selection.
66 Hirshleifer (2001) categorized different types of cognitive errors that investors make i.e. self-deception, occur
67 because people tend to think that they are better than they really are; heuristic simplification, which occurs
68 because individuals have limited attention, memory and processing capabilities; disposition effect, individuals are
69 prone to sell their winners too quickly and hold on to their losers too long In this paper, an attempt is made by
70 the author, mainly to study preference of investors for mutual funds and their performance evaluation.

3 III. Statement of Problem

72 Mutual Funds have not only contributed to the India growth story but have also helped families tap into the
73 success of Indian Industry. As information and awareness is rising more and more people are enjoying the benefits
74 of investing in mutual funds. The success of a mutual fund depends upon the confidence of the investors. But most
75 of the investors are lacking in selection of right mutual funds for their regular commitments. All the problems
76 related to the investors are, lack of awareness and poor after sales service to the investors. The investors believed,
77 so far that the mutual funds promoted by regulated bodies and nationalized banks are guaranteed by the Central
78 Govt. The majority of the new investors don't understand the concept, operations and advantages of investment
79 in mutual funds before investing. This research paper has mainly focused how to evaluate the performance of
80 various income scheme mutual funds in India.

4 a) Objectives

82 The main focus of this research is to analyze the risk, return parameters of the top performing income funds, rank
83 the funds based on various measures, to compare the performance of the fund returns with the market returns, to
84 analyze the stock selection ability and market timing ability of the fund managers of the top performing funds.

5 a) Treynor's performance index

86 Where: Ti = Treynor's performance index Rp = Portfolio's actual return during a specified time period Rf =
87 Risk-free rate of return during the same period ?p = beta of the portfolio Whenever Rp> Rf and ?p > 0 a
88 larger T value means a better portfolio for all investors regardless of their individual risk preferences. In two
89 cases we may have a negative T value: when Rp < Rf or when ?p < 0. If T is negative because Rp < Rf,
90 we judge the portfolio performance as very poor. However, if the negativity of T comes from a negative beta,
91 fund's performance is superb. Finally when Rp-Rf, and ?p are both negative, T will be positive, but in order to
92 qualify the fund's performance as good or bad we should see whether Rp is above or below the security market
93 line pertaining to the analysis period b) Sharpe's Performance index Sharpe (1966) developed a composite index
94 which is very similar to the Treynor's measure, the only difference being the use of standard deviation, instead
95 of beta, to measure the portfolio risk, in other words except it uses the total risk of the portfolio rather than just
96 the systematic risk:

97 Where: Si = Sharpe performance index ?p = Portfolio standard deviation This formula suggests that Sharpe
98 prefers to compare portfolios to the capital market line (CML) rather than the security market line (SML).
99 Sharpe index, therefore, evaluates funds performance based on both rate of return and diversification **??**Sharpe
100 1967). For a completely diversified portfolio Treynor's and Sharpe indices would give identical rankings. P f R
101 P R Treynor ? ? ? ? ? ? ? ? ? = P f R P R Sharpe ? ? ? ? ? ? ? ? ? =

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Treynor (1965) was the first researcher for developing a composite measure of portfolio performance. He measures portfolio risk with beta, and calculates portfolio's market risk premium relative to its beta:

7 IV. Research Methodology c) Jensen's Alpha

Jensen (1968), on the other hand, writes the following formula in terms of realized rates of return, assuming that CAPM is empirically valid: Jensen uses ? as his performance measure. A superior portfolio manager would have a significant positive ? value because of the consistent positive residuals. Inferior managers, on the other hand, would have a significant negative ?. Average portfolio manager having no forecasting ability but, still, cannot be considered inferior would earn as much as one could expect on the basis of the CAPM.

Return performance, Return is measured by its 5 to 10 years Sharpe Ratio. For this, initially the unadjusted monthly return has been calculated for each mutual fund through rate of return measure as:Return = [NAVt -NAV(t-1)] / NAV(t-1) (i)

Where, NAVt = Net Asset Value at time t NAV(t-1) = The corresponding value at time t-1 rit = Return for mutual fund i at time t.

From the above monthly returns, yearly return for each fund has been calculated as:Rit = [(1+r1) × (1+r2) × (1 + r3) ..... × (1 + rn)] -1 (ii)

Where, Rit = Yearly return for fund i for year t rn = Monthly return for the fund for month n n = 1, 2, ...12 the number of months for calculating yearly return and i = 1, 2, ...160, the number of mutual funds taken in the study Then, the risk adjusted performance of each fund has been calculated by using Sharpe performance measure (1966) as explained below:Sp = (Ri -Rf) / ? (iii)

Where,

Ri -mean return on fund i, Rf -mean risk free rate of return measured by T-364 treasury bill and ?i -standard deviation of returns for fund i. From the above table the performance indicators of IDFC fund is 0.9. The market sensitivity index (Beta) is 0.69. The unsystematic risk of IDFC is 4.42. The sharpe performance index, Treynors performance index, Jensen's performance index and sortino ratio are 1.35, 8.65,1.30 and 0.59 respectively. According to the Sharpe, Tryners, Jensens and Sortino ratio models it was found that Tata Balanced fund out performed every other fund. It was followed by HDFC Children's Gift fund in the second place and in the third place was Birla Sun Life Treasury Optimiser fund. In the fourth and fifth place was Franklin India Balanced fund and SBI Magnum Balanced fund respectively.

8 d) Analysis

9 Jp = Rp -

Rf = ? + ? (Rm -Rf) ? ? ? ? ? ? ? ? ? ? ? ? ? ? + ? = = f R M R P f R P R P Jensen ? ? Global Journal of

10 V. Implications of the Research

IDFC Government Securities Fund has a Alpha value of 0.9 which says that the fund is least performing to bench indices. The Tata Balanced Fund has an Alpha value of 9.25, which shows that it has outperformed all the other funds. Tata Balanced Fund has a Beta value of 1.01, which shows that the fund is highly volatile among all other funds. Birla Sun Life Treasury Optimizer Fund has a Beta value of 0.43, which shows that the fund is less volatile in the market. Tata Balanced Fund has a standard deviation of 12.72, which means the fund has high risk factor. Birla Sun Life Treasury Optimizer Fund has a standard deviation of 1.34, which means the fund is less risky. Tata Balanced Fund has the highest return of 21.84 and IDFC has the lowest returns of 6.73. This shows that the Tata Balanced Fund has a very good performance over the period of 9 years. Based on the systematic (Beta) and unsystematic (Std. Dev), Performance indicator (Alpha) and Return, Tata Balanced Fund has outperformed the top ten funds.

11 VI. Conclusion

The mutual fund industry is gaining importance in the recent years. A large number of plans have come up from different financial resources. With the stock markets soaring the investors are attracted towards these schemes. Still only a small segment of the investors invest in mutual funds due to the risk associated with it. Also there is a greater tendency to invest in fixed deposits due to the security. Such investors can invest in safe funds like debt and balanced funds, with comparatively less risk and earn high returns than fixed deposits. In order to excel and make mutual funds a success, companies still need to create awareness and understand the psyche of the Indian consumer. Performance analysis helps investors as well as the fund manager to study about risk and return relationship and is a useful tool for making proper investment decisions. It acts as a guide for the investors in choosing the schemes which best suits their expected returns and risk tolerance level. [1]

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11 VI. CONCLUSION

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Figure 1: Table 1 .

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	Mean	Std Dev	Beta	Alpha	Sharpe	Treynor's	Jensen's	Sortino
Fund	6.73	4.42	0.69	0.9	1.350962	8.653986	1.304348	0.59

Figure 2: Table 1 .

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Figure 3: Table 1 .

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Fund	Sharpe	Treynors	Jensens	Sortino	Weighted Average	RANK
IDFC Government Securities Fund	9	3	10	9	7.75	10
Birla Sun Life Treasury Optimizer Fund	1	10	5	1	4.25	3
ICICI Prudential Banking & PSU Debt Fund	4	8	8	8	7.00	9
HDFC Medium Term Opportunities Fund	3	7	7	7	6.00	6
Religare Invesco Medium Term Bond Fund	2	6	9	10	6.75	7
Tata Balanced Fund	5	1	3	4	3.25	1
HDFC Childrens Gift Fund	6	2	2	5	3.75	2
SBI Magnum Balanced Fund	10	5	1	3	4.75	5
Franklin India Balanced Fund	8	4	4	2	4.50	4
L&T Gilt Fund	7	9	6	6	7.00	8

Figure 4: Table 1 . 12 :

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