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Portfolio Performance Evaluation of Mutual Funds in India – A Study of Hybrid Growth Funds

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Abstract- This research paper attempts to study the portfolio performance evaluation of selected Hybrid growth schemes using Net Asset Values, Return, Beta and Standard Deviation and further used the risk adjusted evaluation methods such as Sharpe, Treynor, and Sortino Ratio. Researchers only emphasized on secondary data sources and selected 12 Mutual Fund schemes of 6 mutual fund institutions and the period of study is kept limited for 5 years i.e. from 2007-08 to 2011-2012. To test the significance; F-test and Spearman's rank correlation were used and found out that there is significant difference between NAV's of two select categories, There is significant difference between scheme returns and benchmark returns of both Hybrid Equity Oriented (HEO) schemes and Hybrid Debt Oriented (HDO) schemes, there is mismatch between ranks of Risk and return of sample funds and the unique risk was meager. On the whole, the performance of the sample Hybrid funds during the study period was average.

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I. INTRODUCTION

Portfolios contain groups of securities that are selected to achieve the highest return for a given level of risk. How well this is achieved depends on how well the portfolio manager or investor is able to forecast economic conditions and the future prospects of the companies, and to accurately assess the risk of each security under consideration. The portfolio performance evaluation primarily refers to the determination of how a particular investment portfolio has performed relative to some comparison benchmarks. The evaluation can indicate the extent to which the portfolio has outperformed or underperformed or it has performed at par with the benchmark. The evaluation of portfolio performance is important because, the investors and the fund managers whose funds have been invested/ managed need to know the relative performance of the portfolio. The performance review will generate and provide information that will help the

investor/ fund manager to assess any need for rebalancing of the investments.

II. REVIEW OF LITERATURE

"Mutual funds are associations of trusts of public members who wish to make investments in the financial instruments or assets of the corporate sector for the mutual benefit of its members." According to **Securities Exchange commission (SEC)**, "A mutual fund is a company that brings together money from many people and invests it in stocks, bonds or other assets. The combined holdings of stocks, bonds or other assets the fund owns are known as its *portfolio*. Each investor in the fund owns shares, which represent a part of these holdings". The SEBI (Mutual Funds) Regulations, 1993 defines a mutual fund as "a fund established in the form of a trust by a sponsor, to raise monies by the trustees through the sale of units to the public, under one or more schemes, for investing in securities in accordance with these regulations." According to SEBI (Mutual Funds) Regulation 1996, "Mutual Funds" means a fund established in the form of a trust to raise money through the sale of units to the public or a section of the public under one or more schemes for investing in securities including money market instruments or gold or gold related instruments or real estate assets. Mutual Fund is an investment vehicle that is made up of a pool of funds collected from many investors for the purpose of investing in securities such as stocks, bonds, money market instruments and similar assets. Mutual funds are operated by money managers, who invest the fund's capital and attempt to produce capital gains and income for the fund's investors. A mutual fund's portfolio is structured and maintained to match the investment objectives stated in its prospectus.

Performance evaluation of mutual funds has been extensively used by Sharpe (1966), Treynor (1965), Jensen (1968), Barua et al (1991) evaluated the performance of master share using CAPM approach from the view point of large investors and fund managers. The study concluded that the fund performed better than the market for small investors and fund management but the fund did not do well when compared to CML. Ravinderan (2003) made the performance analysis of 269 open ended funds in the bear market. Used Sharpe,

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Treynor, Jensen and Fama measures for the period of 4 years and found out that the funds are not managed optimally. Sodhi and Jain (2004) evaluated 26 equity schemes drawn from 26 AMCs belonging to public and private sector. They concluded that the equity mutual funds have overall inferior performance in comparison of risk and Return. Gupta and Amitabh (2004) evaluated the performance of 57 growth schemes and concluded that there is no conclusive evidence which suggests that, performance of sample schemes is superior to the market. Bodla (2005) appraised 24 growth schemes of mutual funds and evaluated by applying risk adjusted performance measures as suggested by Sharpe, Treynor and Jensen and founded out that the difference between market return and fund return is insignificant and systematic risk is not much risky. Phaniswara Raju B. (2008) evaluated performance of 60 mutual fund schemes of 29 mutual fund companies operating during that time and analyzed using risk adjusted performance measures and founded out that many selected schemes failed to outperform the market and there is mis match of the risk return relationship in some schemes. Sukhwinder Kaur et al (2012) studied 10 equity schemes for the period of two years and identified that all sample schemes failed to give reward to variability and only 4 schemes are able to give more reward to volatility than benchmark.

Many research works followed the risk adjusted performance developed by Sharpe, Treynor and some followed Sortino Ratio. Keeping in view the above reviewed literature, this study made an attempt to evaluate the sample funds.

III. OBJECTIVES OF THE STUDY

The **primary objective** of this research study is to evaluate portfolio performance of hybrid funds in India.

The specific objectives are:

1. To know is there any difference between NAV's of two categories of Hybrid funds.
2. To understand, whether there is any difference between Scheme returns and benchmark returns of hybrid funds.
3. To recognize, is there any mismatch between Risk and Return of sample funds.
4. To identify the magnitude of unique risk.

IV. HYPOTHESIS OF STUDY

1. There is no significant difference between the two categories of NAV's of Hybrid schemes
2. There is no significant difference between returns of sample Hybrid Equity oriented schemes and their Benchmarks.
3. There is no significant difference between returns of sample Debt oriented schemes and their Benchmarks.

4. There is no Association between the ranks of risk and return of sample Hybrid funds.
5. There is no Association between the ranks of Sharpe measure and Treynor measure of sample Hybrid funds.

V. METHODOLOGY

To conduct the study, the researchers selected 6 mutual Fund AMCs and 12 Mutual fund open ended schemes; 6 from the category of Hybrid Equity Oriented (HEO) and 6 From Hybrid Debt Oriented categories. All schemes are growth option schemes and selected using convenient sampling. Researchers emphasized only on secondary Data. The major source of data is CRISIL, the India's first Credit Rating Agency and the others include Text books, Journals, Websites and Newspapers. Period of study is kept limited for 5 years i.e. 2007-08 to 2011-2012 financial years. Ranks and Averages are calculated in order to know the category performance and overall performance of sample hybrid schemes. Average of 91 day t-bill issued by Government of India is used as proxy for risk free rate of return. The formulated hypotheses were tested at 5% level of significance using Excel QI Macros 2014 and SPSS Version16.

VI. TOOLS OF ANALYSIS

i. Net Asset Value (NAV)

$$\text{NAV} = \frac{\text{Market value of securities of a scheme}}{\text{Total number of units of the scheme}}$$

ii. Portfolio Return

$$R_p = \frac{(\text{NAV } t - \text{NAV } t-1) \text{Dt} + \text{Ct}}{\text{NAV } t-1}$$

R_p = Portfolio return, NAV_t = Net asset value on time period t , $\text{NAV } t-1$ = Net asset value on time period $t-1$, Dt = Dividend in the form of the bonus that are distributed during the period t , Ct = Cash dividend distributed during the time period t

iii. Standard Deviation

$$\sigma R = \sqrt{\sum (R_p - \bar{R}_p)^2 / N}$$

σR = Standard deviation of the overall return, R_p = Return of the portfolio, \bar{R}_p = Average of the annual returns, N = Number of the observations.

iv. Beta

$$\beta = \frac{\text{Cov}(R_p, R_M)}{\sigma^2(R_M)}$$

$$\text{Cov}(R_p, R_M) = \text{Covariance of the portfolio and the returns of the market}$$

$$\sigma^2(R_M) = \text{Variance of the returns of the market}$$

v. Sharpe Ratio

$$\text{Sharpe} = \frac{R_p - R_f}{\sigma_P}$$

$$\text{Where, } R_p = \text{Portfolio Return, } R_f = \text{Risk free rate of return, } \sigma_P = \text{Total risk of the Portfolio}$$

vi. *Treynor Ratio*

Treynor = $R_p - R_f / \beta_p$, where R_p = Portfolio Return, R_f = Risk free rate of return, β = Beta of Portfolio (Systematic Risk of the Portfolio)

vii. *Sortino Ratio*

Sortino Ratio = $R_p - R_{mar} / \sigma_d$, where; R_p = Portfolio Return, R_{mar} = Minimum acceptable return or Risk free rate of return, σ_d = Total Risk of Portfolio (Downside deviations of the Portfolio)

viii. *Averages are calculated using the following Excel formula:*

=AVERAGE (number1, [number2]...)

ix. *Ranks are calculated using the following Excel formula:*

=RANK (number, ref, [order])

The inferential statistics (F test and Spearman's correlation) was used for the purpose of analysis and interpretation with the help of EXCEL QI Macros 2014 and Statistical Package for Social Sciences (SPSS) 16.0 version.

VII. RESULTS AND DISCUSSION

The portfolio performance evaluation was carried out using Net Asset Values, comparing scheme returns with their benchmark returns, Risk Vs Return and finally used risk adjusted performance evaluation methods like Sharpe, Treynor and Sortino measures.

a) *Net Asset Value*

The performance of a particular scheme of a mutual fund is denoted by Net Asset Value (NAV). Net Asset Value is the market value of the securities held by the scheme. Since market value of the securities changes every day, NAV of a scheme also varies on day to day basis. The NAV per unit is the market value of the securities of a scheme divided by the total number of units of the scheme on any particular date. In this study the daily NAV's of all selected schemes are collected and yearly mean NAV is calculated for each of five years to know the trend of NAV's for the study period (2007-08 to 2011-12) and 5 years Average NAV was also calculated.

When one observes the NAV values of six selected Hybrid equity oriented schemes, from Year 2007-08 to 2008-09 there is a decrement in the value of NAV and raised for the two consecutive years 2009-10 and 2010-11 and again there is a slight decline in the values of NAV's in 2011-12. In the year 2011-12 when the benchmark index fell down, ICICI Balanced scheme's NAV raised. Except this in all other years the NAV's of sample funds and their benchmark index values are moving alike. Among six selected Hybrid Debt Oriented schemes, 4 (66.67%) schemes were

having year on year increment in their NAVs from 2007-08 to 2011-12 and 2 (33.33%) schemes, namely **Kotak Monthly Income Plan** and **FT India Monthly Income Plan - Plan A** recorded a very slight decline in 2008-09 when the benchmark index value recorded slight increment. (Appendix, table II)

To find out $1H_0$ F test was used and the result was; F Critical Two Tail is 7.15 and Calculated F is 3799.11. Hence, the formulated null hypothesis was rejected. Therefore, the researchers conclude that there is significant difference between NAVs of Hybrid Equity Oriented and Hybrid Debt Oriented funds. (Appendix, Table I)

b) *Scheme Returns Vs Benchmark Returns*

The return of the portfolio is commensurate with the returns of its individual assets. The return of the portfolio is the weighted average of the returns of its component assets. In this study an attempt is made to understand the differences of yearly mean returns with that of their benchmark returns for the five years period. The daily actual returns of each selected scheme and its benchmarks were collected for every year for the period of five years and mean is calculated using excel software and annualized returns are calculated using annualization factor.

Appendix, Table III depicts the five year annualized mean returns of selected Hybrid Equity and Debt Oriented Schemes and The benchmarks; CRISIL Balance Ex and CRISIL MIPLEX respectively. The mean return of CRISIL Balance Ex was 9.6110%. Among all selected hybrid equity oriented schemes, 3 (50%) i.e. Reliance Regular Savings Fund – Balanced, FT India Balanced Fund – Growth and Kotak Balance Fund earned high returns over its benchmark and other 3(50%) i.e. SBI Magnum Balanced Fund, ICICI Prudential Balanced Fund and UTI Balanced Fund failed to earn returns like its proxy. CRISIL MIP EX's mean return was 7.1691%. Among the selected Hybrid debt oriented schemes, 4 (66.67%) schemes i.e. Reliance Monthly Income Plan, UTI Monthly Income Scheme, FT India Monthly Income Plan - Plan A and SBI Magnum Children's Benefit Plan gained higher returns than their proxy and ICICI Prudential Blended Plan - Plan B - Option I and Kotak Monthly Income Plan failed to earn higher mean returns in comparison to their benchmark.

To find out $2H_0$ and $3H_0$ F test is applied. For $2H_0$ f critical = 7.15 < f calculated 99.00. Therefore, the formulated null hypothesis is rejected. Therefore the researcher concludes that there is significant difference between Scheme returns and Benchmark returns of Hybrid Equity Oriented schemes. For $3H_0$ f critical = 7.15 < f calculated 353.00. Thus, the researchers conclude that there is significant difference between Scheme returns and Benchmark returns of Hybrid Debt Oriented schemes. (Appendix, Table I)

c) *Risk Vs Return*

The risk and the returns are the important factors in the evaluation of the mutual funds. During the evaluation of the funds and comparing of the funds with that of the other funds of the similar category, the risks should be taken into account during the measuring of the returns. That is, the risks that are involved in achieving of those returns from each of the schemes have to be taken into account.

At the time of evaluation of the mutual funds and while comparing the funds with that of the other funds of the similar category, the risks should be taken into account. During the measurement of the risk of each of the schemes, the past volatility will be considered as the measure of the risk and as an indicator or pointer for the future risk. According to capital asset pricing model (CAPM) total risk is having two components; Systematic risk (Market risk) and unsystematic risk (unique risk). Standard deviation is the measure of total risk i.e. market risk plus unique risk and beta is the measure of systematic risk.

Beta is also very important tool in measuring of the risk. Beta measures the risk of a fund by measuring the volatility of its past returns in relation to the returns of benchmark. Stocks have positive beta, when stocks move in same direction as the general market. Some stocks have negative beta, they move in opposite direction to the general market. A beta of less than 1 is generally less risky than general market. By definition the market index beta is considered to be 1. A beta of 1.0 indicates that the investment's price will move in lock-step with the market. A beta of less than 1.0 indicates that the investment will be less volatile than the market, and, correspondingly, a beta of more than 1.0 indicates that the investment's price will be more volatile than the market.

Portfolio risk can be calculated like calculating the risk of single investment, by taking the standard deviations of the variance of actual returns of the portfolio overtime. This variability of returns commensurate with the portfolio risk and this risk can be quantified by calculating the standard deviation of the variability. It is a tool investment managers use to help quantify risk or deviation from the expected returns. As standard deviation is a performance measure for total risk, the lower the standard deviation, better is the scheme performance.

In this study the returns are measured by comparing the returns of the sample schemes with one another, Beta and standard deviation.

i. *Return*

Appendix, Table IV shows the following; when the scheme returns of the select Hybrid schemes are compared within the categories, Reliance Regular Savings Fund - Balanced with 15.3948% highest mean return in the Hybrid Equity Oriented category ranked top

followed by FT India Balanced Fund - Growth with 10.1891% of mean return ranked 1 and 2 ranks respectively. In this category SBI Magnum Balanced Fund with 8.4158% got sixth rank. The category average of the hybrid equity oriented schemes was 10.4348%; out of six selected schemes in this category 33.33% i.e. 2 schemes had higher return than category average. In the category of Hybrid debt oriented; Reliance Monthly Income Plan with 10.5914% of mean return ranked top followed by UTI Monthly Income Scheme with 8.3914% of mean return. Kotak Monthly Income Plan ranked least with 5.0019% of mean return. The category average return of Hybrid debt oriented was 7.6380% and out of six schemes 2 i.e. 33.33% had higher mean return than the category average. The category average of hybrid Equity Oriented funds is higher than Hybrid debt oriented by 2.7968%.

When the ranks are assigned to the Hybrid schemes irrespective of categories, mean return of Reliance Regular Savings Fund - Balanced with 15.3948% stood first in hybrid equity oriented category and Reliance Monthly Income Plan with 10.5914% of Hybrid debt oriented category got second rank. ICICI Prudential Blended Plan - Plan B - Option I and Kotak Monthly Income Plan with 7.0437% and 5.0019% of mean returns got least two ranks i.e. eleventh and twelfth ranks respectively.

ii. *Beta*

The **beta** of Hybrid Equity oriented schemes fall in the range of 0.9764 the highest for SBI Magnum Balanced Fund - G and 0.8327 the lowest for FT India Balanced Fund - Growth-G scheme in the category. All the selected schemes have Beta less than one, hence, less volatile than the market. The beta of Hybrid Debt Oriented schemes fall in the range of 0.9633 the highest in case of Reliance Monthly Income Plan - G scheme and 0.2288 the lowest in case of ICICI Prudential Blended Plan - Plan B - Option I - G in that category. In this category also the selected schemes have Beta less than one, hence, less volatile than the market.

The category average of Hybrid Equity Oriented Schemes and Hybrid Debt Oriented schemes was 0.8791 and 0.7245 respectively. Comparatively Hybrid Equity Oriented Schemes had higher average Beta than the Hybrid Debt Oriented schemes. While assigning ranks to all selected Hybrid schemes irrespective of their categories; the beta is in between 0.9762 and 0.2288. The Mean Beta of all Hybrid Schemes was 0.8018 and among 12 selected Schemes 9 i.e. 75% of schemes are having Beta higher than the average Beta.

iii. *Risk (Standard Deviation)*

When the analysis was carried out comparing mean risk (standard deviation) the following interpretation was drawn; the standard deviation of hybrid Equity Oriented schemes varies from 19.9803% to 18.1976%. The risk is high for Reliance Regular

Savings Fund - Balanced 19.9803% followed by SBI Magnum Balanced Fund 19.6441% and low to FT India Balanced Fund with 18.1976% of standard deviation. The standard deviation of Hybrid debt oriented schemes varies from 5.8263% and 0.7400% to Reliance Monthly Income Plan and ICICI Prudential Blended Plan - Plan B - Option I respectively. The category average risk of hybrid equity oriented schemes was 19.0509% and out of 6, 3 schemes had higher risk than the category average.

The category average risk of Hybrid debt oriented was 4.2366% and out of six selected schemes, four schemes had higher risk than the category average. The category average standard deviation of hybrid Equity Oriented schemes was higher than category average of Hybrid debt oriented schemes by 14.8143%. The CRISIL Balance Ex Standard Deviation was 19.2916% which is the proxy of hybrid Equity Oriented schemes and two selected schemes standard deviation was higher than their benchmark standard deviation. The CRISIL MIP Ex standard deviation was 4.8681% which is the surrogate for Hybrid debt oriented schemes and out of six selected schemes; three schemes had higher standard deviation than their benchmark.

iv. Risk Free Rate of Return

The risk free rate of return was 7%. In Hybrid equity oriented category, all schemes earned risk premium ranging from 8.3948% to 2.2631%. In Hybrid debt oriented category 5 schemes out of 6 i.e. 83.33% selected schemes earned risk premium ranging from 3.5914% to 0.0437%. Only one scheme i.e. Kotak Monthly Income Plan failed to earn risk premium.

To test H_0 , spearman's rank correlation was applied and the result was; calculated p is .692 greater than p critical 0.649. Hence, the formulated null hypothesis was rejected. As a result, the researchers conclude that there is moderate positive correlation between the ranks of risk and return of sample Hybrid funds. This indicates that there is a meager mismatch between ranks of risk and return of select hybrid funds. (Appendix, table I)

d) Risk Adjusted Performance Measurement

William F. Sharpe (1966) developed a method of measuring return per unit of risk also called as reward to variability. The Sharpe Ratio uses standard deviation which is 'non directional' meaning it does not differentiate between upside volatility or downside volatility. It is risk premium for the unit of risk, which is quantified by the standard deviation of portfolio. It examines whether the return that has been generated was sufficient to reward the persons who invested in the scheme for the degree of the assumed risk. Hence, the Sharpe ratio is a measure of performance of the portfolio compared to the risk taken - the higher the Sharpe ratio, the better the performance and greater the profits for taking additional risk.

Jack L. Treynor (1965) developed a method which is helpful measure the fund's excess return from each unit of systematic risk. It compares the portfolio risk premium (fund's rate of return minus the risk free rate of return) to the diversifiable risk (Beta). The beta of general market is defined as 1. The higher the Treynor ratio the better is the performance of the scheme. The negative Treynor index ascertains that the scheme did not outshine the market.

Sortino Frank (2001) developed a variation of the Sharpe ratio which differentiates **harmful** volatility from volatility in general by replacing standard deviation with downside deviation in the denominator. Thus the Sortino ratio is calculated by subtracting the minimum acceptable return or Risk free rate of return from the return of the portfolio and then dividing by the downside deviation. The Sortino ratio measures the return to "bad" volatility. A large Sortino ratio indicates a low risk of large losses occurring and vice versa. The reason for using a "Downside risk", calculation in the denominator is that, the purpose of investing is to make money and this requires volatility to the upside. It makes no sense to downgrade the money manager for gaining upside advantage.

From Appendix, table V the following interpretation was carried out using the risk adjusted performance ratios:

When the **Sharpe Ratio** is compared, in the Hybrid Equity Oriented category; Reliance Regular Savings Fund - Balanced 0.4202 and SBI Magnum Balanced Fund got the highest (1 rank) and lowest (6 rank) respectively. In the Hybrid Debt Oriented category; Reliance Monthly Income Plan 0.6164 and Kotak Monthly Income Plan -0.3965 got first and sixth ranks respectively. The average reward to variability of Hybrid Equity Oriented schemes was 0.1787 and Hybrid Debt Oriented was 0.1340. Category average of Hybrid Equity Oriented schemes was little high by 0.0434. Overall average of the Hybrid schemes stood at 0.1564. The CRISIL Balance Ex's Sharpe ratio was 0.1353. UTI Balanced Fund, ICICI Prudential Balanced Fund and SBI Magnum Balanced Fund had less Sharpe value than the benchmark. Hence those funds are not performing better and attaining very small amount of reward to variability. The CRISIL Mip Ex's Sharpe ratio was 0.0347. Except Kotak Monthly Income Plan, other five selected Hybrid debt oriented schemes Sharpe Ratio was higher than their benchmark. Hence one can conclude that the reward to variability of Hybrid debt oriented schemes is good. While analyzing Sharpe Ratio of Hybrid schemes irrespective of their categories; Reliance Monthly Income Plan 0.6164 and Reliance Regular Savings Fund - Balanced 0.4202 got first and second ranks respectively. ICICI Prudential Blended Plan - Plan B - Option I 0.0591 and Kotak Monthly Income Plan got least ranks i.e. eleventh and twelfth ranks respectively.

Taking into account **Treynor Ratio**; Treynor value of Hybrid Equity Oriented schemes was ranging from 0.0926 to 0.0145. Reliance Regular Savings Fund - Balanced and SBI Magnum Balanced Fund got first and sixth ranks respectively. Treynor Value of Hybrid debt oriented schemes fell in the range of 0.0373 and -0.0245. Reliance Monthly Income Plan ranked first and Kotak Monthly Income Plan ranked sixth in the category. The category average of Treynor ratio of HEO schemes was 0.0391 and except one fund i.e. Reliance Regular Savings fund –Balanced, all other five schemes had less than the category average. The category average of Hybrid debt oriented schemes was 0.0076, except two schemes named UTI Monthly Income Scheme and Reliance Monthly Income Plan other four schemes had less than category average. The category average of Hybrid Equity Oriented schemes was high over Hybrid debt oriented schemes. When we observe the ranks of Reward to variability (Sharpe) and reward to volatility (Treynor) the ranks are identical to all schemes of both the categories, which means the total risk and systematic risk of those schemes are same. Hence, it is concluded that the unique risk of the sample schemes are very negligible. When the ranks were assigned to Treynor Ratio irrespective of categories, Reliance Regular Savings Fund - Balanced got first rank followed by FT India Balanced Fund - Growth which ranked second. ICICI Prudential Blended Plan - Plan B - Option I and Kotak Monthly Income Plan ranked eleventh and twelfth ranks respectively.

From the **Sortino ratio**, when the values are observed, the highest rank under Hybrid Equity Oriented schemes was assigned to Reliance Regular Savings Fund - Balanced – G 0.2277 and the least rank goes to SBI Magnum Balanced Fund with -0.2398. In Hybrid Debt Oriented category the schemes Reliance Monthly Income Plan ranked the top with -0.3252 and ICICI Prudential Blended Plan - Plan B - Option I ranked the least with -13.0690. The category average of Hybrid equity Oriented schemes was -0.3070 and Hybrid Debt oriented schemes was -1.6102. As Sortino ratio only considers the bad volatility eleven Hybrid schemes out of twelve (91.67%) having negative values indicates high risk for large losses.

To test **5 H₀**, Spearman's rank correlation was used and the result was; the calculated p is .881 is greater than critical p .649. Hence the formulated null hypothesis was rejected. Therefore the researcher concludes that the association between the ranks of Sharpe measure and Treynor measure of Hybrid funds has strong positive correlation. This indicates that the unique risk was low for select Hybrid funds.(Appendix, Table I)

VIII. MAJOR FINDINGS

NAV's of Hybrid Equity Oriented schemes are moving with ups and downs because of higher share of

equity investments whereas Hybrid Debt Oriented schemes NAV's are increasing year on year. Hybrid Equity oriented category, the benchmark CRISIL BALANCEEX mean return was 9.6110% and 3 schemes out of 6 gained higher return than the benchmark. In Hybrid Debt Oriented category, the benchmark CRISIL MIPLEX mean return was 7.1691%, 4 schemes out of 6 earned higher returns than benchmark. Systematic risk of Hybrid Equity Oriented schemes and Hybrid Debt Oriented schemes was less than 1. Hence, the funds systematic risk was less and less volatile. There is mismatch between the risk and return of hybrid funds. But the magnitude of difference was low. The association between the ranks of Sharpe and Treynor ratio has high positive correlation, indicates less proportion of unique risk. The use of downside volatility allows the Sortino ratio to measure the return of negative volatility. It is found that 5 equity funds i.e. 41.67%, all debt funds (12) i.e. 100% and 11 hybrid funds i.e. 91.67% have negative Sortino ratio indicates more number of downside deviations. Reliance Regular Saving Fund-Balanced fund in Hybrid Equity Oriented category, Reliance Monthly Income plan fund in Hybrid Debt Oriented category outshined the benchmarks from all angles of portfolio evaluation. On the whole the performance of hybrid funds was moderate during the study period.

IX. SUGGESTIONS

91.67% (11 out of 12) Hybrid funds have negative Sortino Ratio indicating more downside deviations in the portfolio. The fund managers should try to reduce downside deviations as investors are only concerned with downside returns as these are associated with losses. By hedging the investments the portfolio manager can beat the benchmark. During the period of frequent volatility the investors should invest in hybrid funds. The mutual fund investors in India have so many fund houses and funds with different investment objectives. Due to this the decision to invest has become a greater challenge before the investors. So the fund houses must conduct more awareness programs.

APPENDIX

Table 1 : Hypothesis Results

No	Hypothesis statement	Critical value	Calculated Value	Decision
1H ₀	There is no significant difference between the two categories of NAV's of Hybrid schemes	F=7.15	F=3799.00	Reject
2H ₀	There is no significant difference between returns of sample Hybrid Equity oriented schemes and their Benchmarks.	F=7.15	F=99.00	Reject
3H ₀	There is no significant difference between returns of sample Debt oriented schemes and their Benchmarks.	F=7.15	F=353.00	Reject
4H ₀	There is no Association between the ranks of risk and return of sample Hybrid funds.	P=0.649	P=0.692	Reject
5H ₀	There is no Association between the ranks of Sharpe measure and Treynor measure of sample Hybrid funds	P=0.649	P=0.881	Reject

(Results generated by SPSS, 16 version & EXCEL QI Macros 2014)

Table 2 : Yearly mean NAV's of Hybrid Equity and Debt Oriented Schemes

Hybrid Equity Oriented Schemes							
Year	Mean NAV's and Benchmark Index Values						
	SBI Magnum Balanced Fund - G	UTI Balanced Fund - G	Kotak Balance-G	Reliance Regular Savings Fund - Balanced - G	ICICI Prudential Balanced Fund - G	FT India Balanced Fund - Growth-G	CRISIL BalanceEx
2007-08	41.51	628.74	49.79	13.67	38.91	38.69	1195.27
2008-09	33.42	507.61	41.74	11.89	30.47	32.55	1044.63
2009-10	42.93	650.76	50.68	17.27	36.15	40.57	1278.87
2010-11	50.77	796.08	60.17	22.25	44.31	47.84	1472.83
2011-12	46.79	764.99	58.74	21.15	46.33	47.67	1450.46
Average	43.08	669.64	52.22	17.25	39.23	41.46	1288.412
Hybrid Debt Oriented Schemes							
Year	SBI Magnum Childrens Benefit Plan - G	UTI Monthly I Income Scheme - G	Kotak Monthly Income Plan - G	Reliance Monthly Income Plan - G	ICICI Prudential Blended Plan - Plan B - Option I - G	FT India Monthly Income Plan - Plan A - G	CRISIL MIPEx
2007-08	17.77	14.75	13.83	14.12	11.77	22.31	1077.18
2008-09	18.02	15.31	13.47	14.88	12.79	22.22	1097.55
2009-10	19.68	17.64	14.12	18.86	13.51	25.28	1231.68
2010-11	21.92	19.29	15.30	21.13	14.18	27.25	1321.60
2011-12	23.21	20.23	15.92	22.07	15.34	28.52	1379.74
Average	20.12	17.44	14.53	18.21	13.52	25.12	1221.55

Source: CRISIL (Data compiled by the researchers)

Table 3 : Yearly Mean Returns of schemes and benchmarks of Hybrid Equity and Debt Oriented Schemes

Hybrid Equity Oriented Schemes							
Year	Mean Yearly Returns of Schemes in %						Mean Yearly returns of Benchmark %
	SBI Magnum Balanced Fund – G	UTI Balanced Fund – G	Kotak Balance Fund-G	Reliance Regular Savings Fund – Balanced – G	ICICI Prudential Balanced Fund – G	FT India Balanced Fund – G	CRISIL Balance Ex
2007-08	19.20	15.11	20.48	20.95	13.03	17.81	19.81
2008-09	-31.24	-27.16	-29.31	-19.09	-30.88	-22.96	-20.59
2009-10	55.16	53.08	48.93	67.21	46.73	46.32	36.85
2010-11	4.82	9.20	8.07	7.08	12.05	9.31	9.64
2011-12	-5.91	-3.03	1.35	0.80	5.37	0.40	2.34
Average	8.41	9.44	9.90	15.39	9.26	10.18	9.61
Hybrid Debt Oriented Funds							
Year	Mean Yearly Returns of Schemes in %						Mean Yearly returns of Benchmark %
	SBI Magnum Children's Benefit Plan – G	UTI Monthly Income Scheme – G	Kotak Monthly Income Plan – G	Reliance Monthly Income Plan – G	ICICI Prudential Blended Plan - Plan B - Option I – G	FT India Monthly Income Plan - Plan A – G	CRISIL MIPX (Benchmark)
2007-08	7.30	10.37	7.15	3.39	9.23	10.95	10.22
2008-09	-1.53	3.72	-8.25	13.07	6.64	2.56	0.73
2009-10	15.15	16.39	14.60	22.76	4.46	13.41	13.72
2010-11	8.14	6.06	5.62	7.01	6.35	4.67	6.02
2011-12	7.59	5.40	5.88	6.72	8.50	5.77	5.15
Average	7.33	8.39	5.00	10.59	7.04	7.47	7.17

Source: CRISIL (Data compiled by the researchers)

Table 4 : Sample Hybrid funds Average Annualized Scheme Returns, Beta, Standard Deviation and Risk free rate of return.

S.No	Name of the Scheme	Average Annualized Scheme Returns %	Rank(Category)	Rank (Type)	Average Beta	Rank(Category)	Rank (Type)	Average Scheme's Standard Deviation %	Rank (category wise)	Rank (Type)	Average Risk Free Rate of Return %
Hybrid-Equity Oriented											
1	SBI Magnum Balanced Fund - G	8.4158	6	7	0.9764	1	1	19.6441	2	2	7
2	UTI Balanced Fund - G	9.4439	4	5	0.8618	3	5	19.0841	3	3	7
3	Kotak Balance-27	9.9017	3	4	0.8370	5	7	18.4375	5	5	7
4	Reliance Regular Savings Fund - Balanced - G	15.3948	1	1	0.9067	2	4	19.9803	1	1	7
5	ICICI Prudential Balanced Fund - G	9.2631	5	6	0.8599	4	6	18.9619	4	4	7

6	FT India Balanced Fund - Growth-30	10.1891	2	3	0.8327	6	8	18.1976	6	6	7
	Category Average	10.4348	-	-	0.8791	-	-	19.0509	-	-	7
	CRISIL BALANCEEX	9.6110	-	-	1.0000	-	-	19.2916	-	-	7
Hybrid Debt Oriented											
7	SBI Magnum Childrens Benefit Plan - G	7.3277	4	10	0.7574	4	10	4.5228	4	10	7
8	UTI Monthly Income Scheme - G	8.3914	2	8	0.6483	5	11	3.7927	5	11	7
9	Kotak Monthly Income Plan - G	5.0019	6	12	0.8157	3	9	5.0388	3	9	7
10	Reliance Monthly Income Plan - G	10.5914	1	2	0.9633	1	2	5.8263	1	7	7
11	ICICI Prudential Blended Plan - Plan B - Option I - G	7.0437	5	11	0.2288	6	12	0.7400	6	12	7
12	FT India Monthly Income Plan - Plan A - G	7.4721	3	9	0.9333	2	3	5.4991	2	8	7
	Category Average	7.6380	-	-	0.7245	-	-	4.2366	-	-	7
	Average of All schemes	9.0364	-	-	0.8018	-	-	11.6438	-	-	7
	CRISIL MIPEX	7.1691	-	-	1.0000	-	-	4.8681	-	-	-

Source: CRISIL (Data compiled by the researchers) *State Bank of India, **Unit Trust of India

Table 5: Hybrid Funds Average Sharpe's, Treynor's, and Sortino's ratios

S.No	Name of the Scheme	Mean Sharpe's Ratio	Rank (Category)	Rank (Type)	Mean Treynor's Ratio	Rank (Category)	Rank (Type)	Mean Sortino's Ratio	Rank (Category)	Rank (Type)
Hybrid Equity Oriented funds										
1	SBI Magnum Balanced Fund - G	0.0721	6	10	0.0145	6	8	-0.2398	6	6
2	UTI Balanced Fund - G	0.1281	4	6	0.0284	4	5	-0.1805	4	4
3	Kotak Balance-G	0.1574	3	5	0.0347	3	4	-0.1484	3	3
4	Reliance Regular Savings Fund - Balanced - G	0.4202	1	2	0.0926	1	1	0.2277	1	1
5	ICICI Prudential Balanced Fund - G	0.1194	5	7	0.0263	5	6	-0.1842	5	5
6	FT India Balanced Fund - G	0.1752	2	4	0.0383	2	2	-0.1383	2	2
	Category Average	0.1787	-	-	0.0391	-	-	-0.0307	-	-
	CRISIL BALANCE EX	0.1353	-	-	0.0261	-	-	NA	-	-
Hybrid Debt oriented Funds										
7	SBI Magnum Children's Benefit Plan - G	0.0725	4	9	0.0043	4	10	-1.3755	3	9
8	UTI Monthly Income Scheme - G	0.3669	2	3	0.0215	2	7	-1.3769	4	10
9	Kotak Monthly Income Plan - G	-0.3965	6	12	-0.0245	6	12	-1.8053	5	11
10	Reliance Monthly Income Plan - G	0.6164	1	1	0.0373	1	3	-0.3252	1	7
11	ICICI Prudential Blended Plan - Plan B - Option I - G	0.0591	5	11	0.0019	5	11	-13.069	6	12
12	FT India Monthly Income Plan - Plan A - G	0.0858	3	8	0.0051	3	9	-1.1866	2	8
	Category Average	0.1340	-	-	0.0076	-	-	-3.1898	-	-
	Average of All schemes	0.1564	-	-	0.0234	-	-	-1.6102	-	-
	CRISIL MIPEX	0.0347	-	-	0.0017	-	-	NA	-	-

Source: CRISIL (Data Compiled by the researchers)

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