



A STUDY ON PERFORMANCE OF SBI HYBRID MUTUAL FUNDS IN GROWTH SCHEMES

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Abstract:

As most of the investments involve risk the skilful management becomes very important to reduce the risk and to increase the chances of higher returns over time. This can be achieved through the diversification of investments. The hybrid mutual fund schemes are schemes which diversify the investment in both equity and debt funds. In this study four SBI hybrid mutual fund schemes were selected for analysis. Data were collected for four years from 2010-11 to 2013-14. By taking BSE sensx return as market return the alpha and beta values were calculated under CAPM model. The systematic risk, unsystematic risk, reactions of the schemes with market trend, characteristics line and correlation are also determined in this study. From this study it can be concluded that SBI Regular Savings Fund has the opposite reaction with market trend. SBI Magnum Balanced Fund react more with market in the same trend.

Key words: Growth Fund, Hybrid Scheme, Mutual Fund, Return & Risk.

Introduction:

Every form of investment involves risk. However, skilful management, selection of fundamentally sound securities and diversification can help reduce the risk, while increasing the chances of higher returns over time. The mutual fund industry in India began in 1963 with the formation of the Unit Trust of India (UTI) as an initiative of the Government of India and the Reserve Bank of India. Much later, in 1987, SBI Mutual Fund became the first non-UTI mutual fund in India. Subsequently, the year 1993 heralded a new era in the mutual fund industry. This was marked by the entry of private companies in the sector. After the Securities and Exchange Board of India (SEBI) Act was passed in 1992, the SEBI Mutual Fund Regulations came into being in 1996. Since then, the Mutual fund companies have continued to grow exponentially with foreign institutions setting shop in India, through joint ventures and acquisitions. As the industry expanded, a non-profit organization, the Association of Mutual Funds in India (AMFI), was established on 1995. Its objective is to promote healthy and ethical marketing practices in the Indian mutual fund Industry.

To fulfill any investment objective, investors should first evaluate their risk appetite. While some investors are satisfied by investing in a low-risk: low-return scheme, others are willing to endure short-term loss for long-term potential gains. After investing the money in a mutual fund, one can earn returns in two forms, in the form of dividends declared by the scheme and through capital appreciation - meaning an increase in the value of investments. Mutual Funds help investors generate better inflation-adjusted returns, without spending a lot of time and energy on it. Mutual Funds provide an ideal investment option to place the savings for a long-term inflation adjusted growth; so that the purchasing power of one's hard earned money does not plummet over the years. Backed by a dedicated research team, investors are provided with the services of an experienced fund manager who handles the financial decisions based on the performance and prospects available in the market to achieve the objectives of the mutual fund scheme. Mutual funds, on the other hand, are relatively less expensive. The benefit of scale in brokerage and fees translates to lower costs for investors. Moreover, since every mutual fund is regulated by SEBI, it can be assured that

the investments in mutual funds are managed in a disciplined and regulated manner and are in safe hands.

Objective of the Study:

To know the best performance of the growth funds in hybrid schemes managed by SBI Mutual fund pvt ltd. this study has been undertaken.

Period of the Study:

For evaluating the performance of the growth funds in hybrid schemes managed by SBI Mutual fund Pvt Ltd. fund ranges from the financial year 2011-12 to 2014-15, i.e., for 4 years has been studied.

Data and Methodology:

The data collected from the secondary sources. The required data was available in www.sbimf.com and www.bseindia.com. The data was used to calculate the beta value for each and every selected scheme to find out the best performance of the scheme. The beta is the measure of systematic risk and it is the ratio of covariance between market return and the security's return to the market return variance. The risk of a portfolio of securities is measured by its variance or standard deviation. The variance of a portfolio is the sum of:

- The variances of individual securities times (the square of) their respective weights and
- The covariance (that is, the correlation coefficient between securities times their standard deviations) of securities times twice the product of their respective weights.

$$\begin{aligned}\beta_s &= \text{Cov}_{s,m} / \sigma^2_m \\ &= \sigma_s \sigma_m \text{Cor}_{s,m} / \sigma_m \times \sigma_m \\ &= (\sigma_s / \sigma_m) \times \text{Cor}_{s,m}\end{aligned}$$

The following steps are involved in the calculation of beta.

1. Calculate the average return on market (r_m)
2. Calculate the average return on selected security (r_s)
3. Calculate beta by using following procedure
 - a) Calculate deviations of returns on market from the average return.
 - b) Calculate deviations of returns on selected security from the average return.
 - c) Multiply deviations of market returns and deviations of selected security. Take the sum and divide by number of observations to get covariance.
 - d) Calculate the squared deviations of the market returns. Take the sum and divide by number of observations to find the variance of market return.

Sampling Design:

The first non-UTI mutual fund in India is SBI Mutual Fund established in 1987. SBI mutual fund provides seven schemes such as Equity schemes, Debt/ Income schemes, Liquid schemes, Hybrid schemes, Fixed maturity plan, Exchange Traded schemes and Fund of Fund schemes. Out of these schemes only hybrid schemes are considered for this study as these schemes invest in a mixture of debt and equity securities in different proportions as prescribed in the scheme information document. There are 28 schemes in SBI Hybrid schemes which include both Dividend fund and Growth fund. Only growth schemes are considered for this study. Because of unavailability of data for study period only four schemes such as SBI Magnum Monthly Income Plan, SBI Regular Savings Fund, SBI Magnum Monthly Income Plan Floater and SBI Magnum Balanced Fund were selected out of ten (SBI EDGE Fund, SBI Magnum Balanced Fund, SBI Regular Savings Fund, SBI Magnum Monthly Income Plan, SBI Magnum Monthly Income Plan – Floater, SBI Capital Protection Oriented Fund - Series

II, SBI Capital Protection Oriented Fund - Series III, SBI Dual Advantage Fund Series I, SBI Dual Advantage Fund Series II, SBI Dual Advantage Fund Series III) growth schemes.

Results and Discussion:

The results of the study have been discussed in the subsequent paragraphs under the different heads:

Returns:

Daily returns for BSE sensex index were taken to calculate average yearly market return. Daily returns for selected mutual fund schemes were also used to calculate average yearly return. It can be known from Table 1 market returns were negative in throughout the study period. SBI Magnum Balanced Fund has more fluctuation in its return (136.57) among the selected schemes. SBI Magnum Monthly Income Plan Floater has lesser fluctuation in its return (16.32) among the selected schemes.

TABLE 1
Returns

Year	Average yearly return in %				
	Market	SBI Magnum Monthly Income Plan	SBI Regular Savings Fund	SBI Magnum Monthly Income Plan Floater	SBI Magnum Balanced Fund
2011-12	-3.823	1.753	1.459	2.522	1.891
2012-13	-16.422	2.547	2.787	2.806	-2.349
2013-14	-3.348	4.241	3.262	3.448	5.824
2014-15	-2.154	2.272	2.771	3.569	7.497
Mean	-6.437	2.703	2.569	3.086	3.216
Std. Deviation	6.694	1.077	0.775	0.504	4.391
Coefficient of variation	-104.00	39.83	30.15	16.32	136.57
Variance of returns	33.608	0.870	0.450	0.190	14.463

Source: Calculated by using daily returns from www.sbimf.com and www.bseindia.com.

Regression Parameters:

Regression statistics such as Alpha, Beta, Correlation, Coefficient of determination, Variance of returns, Adjusted R-Square, F-Statistic and Covariance are given in the Table 2.

TABLE 2
Summaries of Regression Parameters

Regression Statistics	SBI Magnum Monthly Income Plan Vs. Market Returns	SBI Regular Savings Fund Vs. Market Returns	SBI Magnum Monthly Income Plan Floater Vs. Market Returns	SBI Magnum Balanced Fund Vs. Market Returns
Alpha (intercept) α	2.798	2.471	3.302	6.975
Standard error of alpha	0.981	0.703	0.412	1.831
Beta	0.015	-0.015	0.034	0.584
Standard error of beta	0.113	0.081	0.048	0.211
Correlation	0.092	-0.133	0.446	0.890

Coefficient of determination	0.008	0.018	0.199	0.792
Variance of returns	0.870	0.450	0.190	14.463
Adjusted R-Square	-0.487	-0.473	-0.202	0.688
Standard Error	1.313	0.940	0.552	2.451
F-Statistic	0.017	0.036	0.496	7.629
Significance	0.908	0.867	0.554	0.110
Covariance	0.494	-0.518	1.128	19.625
Observations	4	4	4	4

Source: calculated by using daily returns from www.sbimf.com and www.bseindia.com.

Beta:

All the selected schemes are having beta value at less than 1 based on the yearly return during 2010-11 to 2013-14. It indicates that returns on these schemes are less volatile than the market returns.

Alpha (intercept):

Alpha (intercept) is returns earned by the selected schemes when the market return is zero. The returns of selected schemes are given in Table 3 when the yearly market return (R_m) is expected to be 1%. The returns of selected schemes = $\alpha + (\beta \times R_m)$.

TABLE 3
ALPHA

Schemes	Scheme's return when market return is 1%
SBI Magnum Monthly Income Plan	$2.798 + (0.015 \times 0.01) = 2.798$
SBI Regular Savings Fund	$2.471 + (-0.02 \times 0.01) = 2.471$
SBI Magnum Monthly Income Plan Floater	$3.302 + (0.034 \times 0.01) = 3.302$
SBI Magnum Balanced Fund	$6.975 + (0.584 \times 0.01) = 6.981$

Source: calculated by using daily returns from www.sbimf.com and www.bseindia.com.

Coefficient of Correlation:

Except SBI Regular Savings Fund all other selected schemes are having positive correlation which indicates that when the market return goes up, their return also goes up. The negative correlation of SBI Regular Savings Fund indicates that when the market return goes up, its return shall go down.

Coefficient of Determination:

Coefficient of determination indicates the percentage of the variance of selected schemes' returns explained by the changes in the market returns. It can be seen from Table 2 that the market explains 0.8% of SBI Magnum Monthly Income Plan's risk, 1.8% of SBI Regular Savings Fund's risk, 19.9% of SBI Magnum Monthly Income Plan Floater's risk and 79.2% of SBI Magnum Balanced Fund's risk. The unexplained variance is the firm - specific variance ie., $(1 - \text{Coefficient of determination})$. So the unexplained variance of SBI Magnum Monthly Income Plan is 99.2%, SBI Regular Savings Fund is 98.2%, SBI Magnum Monthly Income Plan Floater is 80.1% and SBI Magnum Monthly Income Plan is 20.8%. Thus systematic and non - systematic risks are shown in Table 4.

Total risk = Systematic risk + Unsystematic risk

Systematic risk = (Coefficient of determination) x (Security Variance)

Unsystematic risk = $(1 - \text{Coefficient of determination}) \times (\text{Security Variance})$

TABLE 4 (RISK)

SCHEMES	Risk		Total Risk
	Systematic risk	Unsystematic risk	Variance of returns
SBI Magnum Monthly Income Plan	0.007	0.863	0.870
SBI Regular Savings Fund	0.008	0.442	0.450
SBI Magnum Monthly Income Plan Floater	0.038	0.152	0.190
SBI Magnum Balanced Fund	11.455	3.008	14.463

Source: calculated by using daily returns from www.sbimf.com and www.bseindia.com.

The Characteristics Line:

The yearly return on four schemes against yearly return on Sensex covering a period of four years from 2010-11 to 2013-14 were plotted in Chart 1, 2, 3 and 4. The characteristics line of each firm is drawn. The beta for each scheme is the slope of its characteristic line. The regression line of the market model is called the characteristics line.

SBI Magnum Monthly Income Plan:

The characteristics line of SBI Magnum Monthly Income Plan can be calculated by using Table 5 and it is shown in Chart 1. The characteristics line = $\alpha + \beta r_m$. So the characteristics line of SBI Magnum Monthly Income Plan shall be $2.798 + 0.015 r_m$. As the beta value of this scheme is positive the slope goes up. This indicates that the return of the scheme increases with increase in market return.

TABLE 5

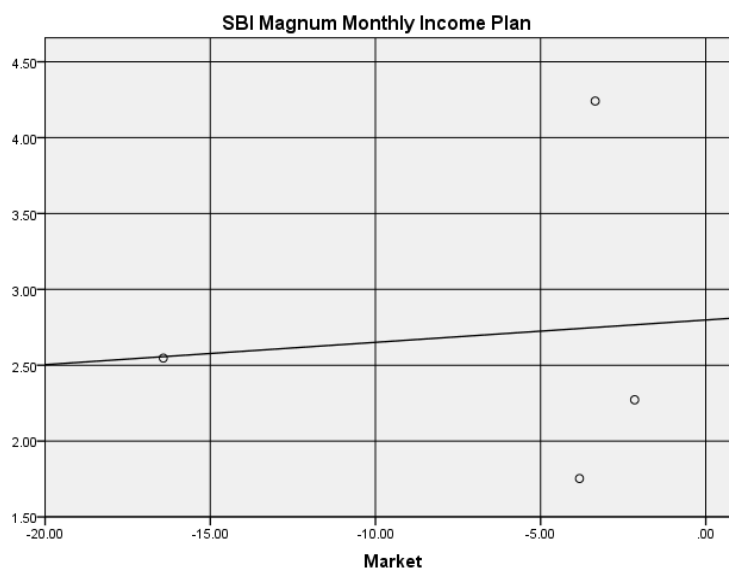
Model Summary and Parameter Estimates

Dependent Variable: SBI Magnum Monthly Income Plan

Independent Variable: Market

Equation	Model Summary	F	df1	df2	Sig.	Parameter Estimates	
	R Square					Constant	b1
Linear	.008	.017	1	2	.908	2.798	.015

CHART 1



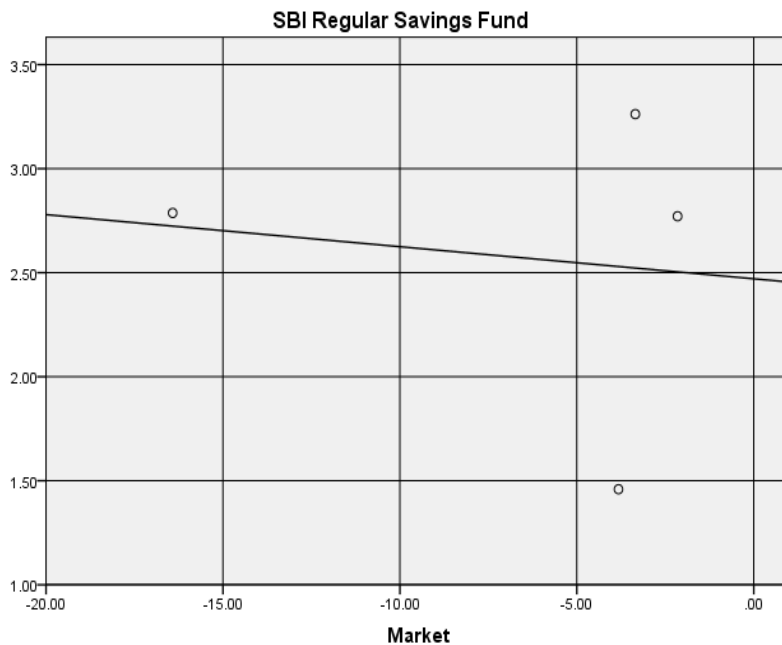
SBI Regular Savings Fund:

The characteristics line of SBI Regular Savings Fund can be calculated by using Table 6 and it is shown in Chart 2. The characteristics line = $\alpha + \beta r_m$. So the characteristics line of SBI Regular Savings Fund shall be $2.471 - 0.015 r_m$. As the beta value of this scheme is negative the slope goes down. This indicates that the return of the scheme decreases with increase in market return.

TABLE 6
Model Summary and Parameter Estimates
 Dependent Variable: SBI Regular Savings Fund
 Independent Variable: Market

Equation	Model Summary	F	df1	df2	Sig.	Parameter Estimates	
	R Square					Constant	b1
Linear	.018	.036	1	2	.867	2.471	-.015

CHART 2

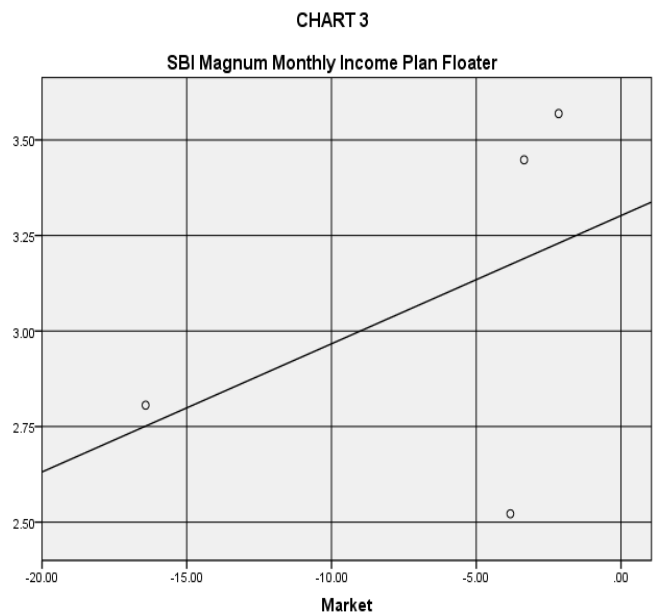


SBI Magnum Monthly Income Plan Floater

The characteristics line of SBI Magnum Monthly Income Plan Floater can be calculated by using Table 7 and it is shown in Chart 3. The characteristics line = $\alpha + \beta r_m$. So the characteristics line of SBI Magnum Monthly Income Plan Floater shall be $3.302 + 0.034 r_m$. As the beta value of this scheme is positive the slope goes up. This indicates that the return of the scheme increases with increase in market return.

TABLE 7
Model Summary and Parameter Estimates
 Dependent Variable: SBI Magnum Monthly Income Plan Floater
 Independent Variable: Market

Equation	Model Summary	F	df1	df2	Sig.	Parameter Estimates	
	R Square					Constant	b1
Linear	.199	.496	1	2	.554	3.302	.034

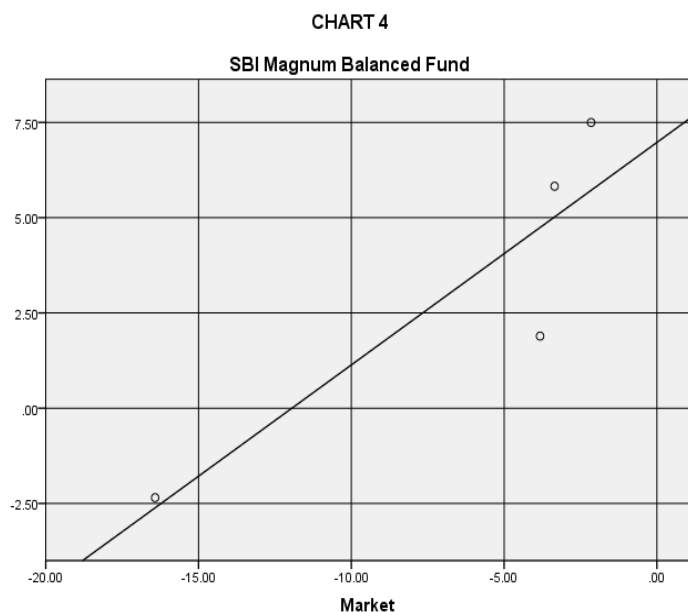


SBI Magnum Balanced Fund:

The characteristics line of SBI Magnum Balanced Fund can be calculated by using Table 8 and it is shown in Chart 4. The characteristics line = $\alpha + \beta r_m$. So the characteristics line of SBI Magnum Monthly Income Plan Floater shall be $6.975 + 0.584 r_m$. As the beta value of this scheme is positive the slope goes up. This indicates that the return of the scheme increases with increase in market return.

TABLE 8
Model Summary and Parameter Estimates
 Dependent Variable: SBI Magnum Balanced Fund
 Independent Variable: Market

Equation	Model Summary	F	df1	df2	Sig.	Parameter Estimates	
	R Square					Constant	b1
Linear	.792	7.629	1	2	.110	6.975	.584



Conclusion:

The risk of investment can be reduced through skilful management, selection of fundamentally sound securities and diversification. In hybrid schemes the investments are diversified to equity funds and debt schemes. But the proportion of investments, objectives of investments etc shall differ from scheme to scheme. From this study it can be concluded that except SBI Regular Savings Fund all other schemes are react in the same way as the market. SBI Magnum Balanced Fund can be considered as best among all when market has upward tendency. Because it has a highest beta value and the chart also shows that a small increase in market return cause the high return in this scheme. This scheme has the highest risk also as a small decrease in the market has a great decrease in scheme return. The SBI Magnum Monthly Income Plan has a little increase than market when the market goes up.

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