

Selectivity And Market Timing Ability Of Fund Managers In India: An Analysis Of Selected Equity Mutual Funds

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Abstract: A Mutual Fund is a trust that pools the savings of a number of investors who share a common financial goal. The money thus collected is invested by the fund manager in different types of securities depending upon the objective of the scheme. These could range from shares to debentures to money market instruments. The income earned through these investments and the capital appreciations realized by the schemes are shared by its unit holders in proportion to the number of units owned by them. Thus a mutual fund is the most suitable investment for the common person as it offers an opportunity to invest in a diversified, professionally managed basket of securities at a relatively low cost. Since small investors generally do not have adequate time, knowledge, experience & resources for directly accessing the capital market, they have to rely on an intermediary, which undertakes informed investment decisions & provides consequential benefits of professional expertise.

The present study is aimed to examine the performance of equity schemes of mutual funds on the basis of selectivity and market timing abilities of fund managers in security market. Mutual funds cannot guarantee a fixed rate of return. It depends on the market condition. If a particular scheme is performing well then more return can be expected. It also depends on the fund managers' expertise and knowledge. Market timing skills relate to the ability of fund managers to correctly assess the direction of the market and position their portfolio accordingly. Selectivity skills refer to the capabilities of fund managers in generating superior performance by means of stock selection techniques. The study which is based on the Jenson Measure and Treynor-Mazuy Model, evaluates which equity fund entails selectivity and market timing over a period of 10 years.

Keywords: Mutual Fund, Selectivity, Market Timing Abilities, Performance Evaluation.

Introduction

Since the development of the Indian Capital Market and deregulations of the economy in 1992 it has come a long way with lots of ups and downs. There have been structural changes in both primary and secondary markets since 1992. Mutual Funds are the key contributors to the globalization of financial markets and one of the main sources of capital flows to emerging economies. Mutual Funds, as the name indicates is the fund where in numerous investors come together to invest in various schemes of a fund. Mutual Funds play a crucial role in an economy by mobilizing savings and investing them in the capital market, thus establishing a link between savings and the capital market. A mutual fund is an institution that invests the pooled funds of public to create a diversified portfolio of securities. Pooling is the key to mutual fund investing. Each mutual fund has a specific investment objective and tries to meet that objective through active portfolio management. Mutual funds provide the investor with professional management of funds and diversification of investment. Investors who invest in mutual funds are provided with units to participate in stock markets. These units are investment vehicle that provide a means of participation in the stock market for people who have neither the time, nor the money, nor perhaps the expertise to undertake the direct investment in equities. On the other hand, they also provide a route into specialist markets where direct investment often demands both more time and more knowledge than an investor may possess. The price of units in any mutual fund is governed by the value of underlying securities. The value of an investor's holding in a unit can therefore, like an investment in share, can go down as well as up. Therefore, it is generally said that mutual funds are subjected to market risk.

Concept of Mutual Fund

A mutual fund is a special type of institution that acts as an investment instrument. It is essentially a mechanism of pooling together the savings of a large number of investors for collective investments with an objective of attractive yields and appreciation in their value. The money, thus collected is invested by the fund manager in different types of securities depending upon the objective of the scheme.

According to Association of Mutual Funds in India (AMFI)

“A mutual fund is a trust that pools the savings of a number of investors who share common financial goal. Anybody with an investible surplus of as little as a few thousand rupees can invest in mutual funds. This investor buys units of a particular mutual fund scheme that has a defined investment objective and strategy.”

Organization of a Mutual Fund

In accordance with the provisions of the Indian Trust Act 1882, every mutual fund shall be constituted in the form of a trust. An attempt was made for the first time in the SEBI guidelines, 1992 to spell out in clear terms the established norms for mutual funds. The SEBI contemplated a four-tier system for managing the affairs of mutual funds. The four constituents are the sponsoring company, the trustees, the custodians and the assets management company (AMC). The SEBI (mutual funds) regulations, 1996 incorporated all the four constituents for the management of mutual funds. These are as follows:

Sponsors

“Sponsor” is defined under the SEBI regulations as any person who, acting alone or in combination with another body corporate, establishes a mutual fund. The sponsor of a fund is akin to the promoter of a company as he gets the fund registered with SEBI. In other words, the promoter of the mutual fund is called a sponsor. The following are the eligibility norms for a sponsor:

- The sponsor should have a sound track record and experience in the relevant field of financial services for a minimum period of five years.
- Sponsor has to contribute at least 40% of the net worth of the AMC.
- It is the sponsors who identify and appoint the trustees and the AMC.
- The sponsor either directly or acting through the trustees, will also appoint a custodian to hold the fund assets.
- It is the duty of sponsors to submit to the SEBI, trust deed and draft of memorandum and articles of association of AMC. Once the mutual fund is registered the sponsors technically go in background.

Trustees

The Indian Trust Act of 1882 is applicable to mutual funds. A sponsor under the Indian Trust Act 1882 creates mutual fund trust, which is the main body in creation of mutual fund. As defined under the SEBI (mutual Funds) Regulations, 1996, “Trustee” means the board of trustees or the trustee company who hold the property of mutual fund in trust for the benefit of the unit holders. Trustees may be appointed as an individual or as a trustee company. To ensure fairness, mutual funds require that one cannot be a trustee or a director of a trustee company in more than one mutual fund. Ideally a trustee should be a person with experience in financial services.

Custodian

The SEBI requires that each mutual fund shall have a custodian who is independent. Custodian should be an agency which is registered with the SEBI. The SEBI regulations provide for the appointment of a custodian by the trustee of mutual fund for “carrying on the activity of safe keeping of the securities or participating in any clearing system” on behalf of a mutual fund. Custodian is not permitted to act as a custodian of more than one mutual fund without the prior approval of SEBI. The approval of any agency as custodian would depend upon its track record, experience, quality of services, transparency and computerization and other infrastructure facilities. The assignments of custodian are:

- Receipt or script
- Regular reconciliation of assets to accounting records.
- Timely resolution of discrepancies and failures.
- Getting properly registered or recorded.

Assets Management Company (AMC)

Assets Management Company is a body engaged to run the working of mutual fund. It is a body corporate whose memorandum and articles of association are to be approved by the SEBI. The sponsor or the trustees appoint AMC to manage the affairs of the mutual fund. It is the AMC which operates all schemes of the fund. A company can act as an AMC of only one mutual fund. To ensure efficient management, the SEBI desires that existing Asset Management Company should have a sound track record (good net worth, dividend paying capacity and profitability etc.), good reputation and fairness in transactions. The directors of AMC should be expert in relevant fields like portfolio management, investment analysis and financial administration because any AMC is basically involved in these three activities. Directors are appointed with prior approval of trustees. An AMC is expected to operate independently. The SEBI regulations require that at least fifty percent of the directors should be such who do not have any association with the sponsor or trustees. Any director of the AMC who is amongst the said fifty percent is free to be director of another AMC. Its chairman should be independent person. To ensure stake of sponsors in the AMC it is required that at least forty percent of its net worth is contributed by the former. The AMC, itself should be financially sound and should have a net worth of at least Rs. 100 millions.

Review of Literature

Sarkar and Mazumdar (1995) evaluated financial performance of five close ended growth funds for the period February 1991 to August 1993. They concluded that the performance was below average in terms of alpha values and statistically not significant and fund possessed high risk.

Russ Wermers, (1999) found the relationship that exists between Mutual fund herding and its impact on stock prices. The trading activity of the mutual fund industry from 1975 to 1994 was analyzed to determine funds “herd” when they trade stocks and to investigate the impact of herding on stock prices. Although little herding was found by mutual funds in the average stock, much higher levels were found in the trades of small stocks and in trading by growth-oriented funds. Stocks that herd buy outperform stocks.

SP Kothari, Jerold B Warner (2001) in their study on standard mutual fund performance measures used the simulated funds whose characteristics mimic actual funds. It was found that performance measures used in previous mutual fund research have little ability to detect economically large magnitudes of abnormal fund performance, particularly if a fund’s style characteristics differ from those of the value-weighted market portfolio.

Roy & Deb (2003) used conditional performance evaluation on a sample of 89 Indian MF schemes measuring with both unconditional and conditional form of CAPM model. The results suggest that the use of conditioning lagged information variables improves the performance of mutual fund schemes, causing alphas to shift towards right and reducing the number of negative timing coefficients.

Michael J Cooper, Huseyin Gulen, P Raghavendra Rau (2005) have examined whether mutual funds change their names to take advantage of current hot investment styles, and what effects these name changes have on inflows to the funds, and to the funds’ subsequent returns. They further find that the year after a fund changes its name to reflect a current hot style, the fund experiences an average cumulative abnormal flow of 28%, with no improvement in performance.

Objectives of the Study

1. To evaluate the performance of selected equity mutual funds on the basis of stock selection and market timing abilities of fund managers.
2. To make a comparative analysis of selected equity mutual fund on the basis of stock selection and market timing abilities of fund managers.
- 3.

Research Methodology

a) Collection of Data

The present study is conducted for a period of 10 years i.e. from NAVs selected for the long term ranging within every month to 10 years from 1 April, 2001 to 31 March, 2011 and along with the index- value of BSE SENSEX is also considered for the same period. Secondary data is used for the analysis.

b) Methodology

Mutual funds can be evaluated by comparing the return on market and return on stock. If during the pricing period of the return on stock is negative, then it indicates overpricing and if these are positive then it indicates underpricing. Relative performance measurement is used to measure the performance of the MF with SENSEX.

The various statistical tools have been used to compare the performance of the funds. Annualized Rate of return on Treasury Bills (91 days) is taken as surrogate measure of risk free return in this research.

c) Analysis of Stock Selection and Market Timing Ability of Mutual Fund Managers in India

The measurement of the investment performance of fund managers is a perennial issue for potential and committed investors. The performance of fund managers influences the manner in which investors place their wealth. It is customary to analyze portfolio performance into main components i.e. market timing and security selection.

In the pure form, market timing involves shifting funds between a market index portfolio and a safe asset (such as treasury bills, money market funds or cash) depending on whether the market as a whole is expected to outperform the safe asset. Managers who forecast a declining market can position a portfolio properly by increasing the cash percentage of the portfolio or by decreasing the beta of the equity portion of the portfolio. Thus market timing is defined as the strategy of changing a fund's allocation between stocks and cash to capture gains in up markets and to avoid losses in down markets.

Various methodologies have been suggested in the financial literature to test the selectivity and market timing abilities of the fund managers. However, two models of selectivity and market timing have been empirically examined in this study namely, the Jensen Measure and Treynor and Mazuy Model.

Jensen Measure:

It is a regression of excess fund return with excess market return given by Michael C. Jensen in 1968. It measures the portfolio manager's predictive ability to achieve higher return than expected for the given riskiness. The basic model has been expressed as:

$$R_{pt} - R_{ft} = \alpha_p + \beta_p (R_{mt} - R_{ft}) + \epsilon_{pt}$$

Where,

R_{pt} = Return on a portfolio in month t

R_{ft} = Risk free return in month t

R_{mt} = Return on the market portfolio in month t

α_p = Alpha, the intercept of the regression equation. It measures the stock selection ability.

β_p = Beta coefficient of the portfolio. It is a measure of systematic risk.

ϵ_{pt} = error term

The intercept of the equation provides Jensen's measure of performance. The measure is derived from CAPM. This involves running a regression with excess return on security and that on the market acting as dependent and independent variables respectively, where excess return is computed with reference to return on a risk free return. Jensen's alpha (α) has been used to measure the stock selection ability of the mutual fund managers. A statistically significant positive value of alpha would imply a superior manager. Superior performance could arise from security selection skills, and /or from good market timing. However, the above specification assumes that the systematic risk exposition is constant overtime (as β_p is fixed) and exclusively concentrates on the security selection skills or lack thereof. Thus, a positive and significant value of alpha p indicates superior micro-forecasting abilities while a negative value evidences wrong micro-forecasting abilities.

Treynor and Mazuy Model

TM (1966) have suggested that in order to detect the market timing abilities of fund managers one should add a quadratic term (squared term) to the excess return version of the linear relationship model as under:

$$R_{pt} - R_{ft} = \alpha_p + \beta_p (R_{mt} - R_{ft}) + \gamma_p (R_{mt} - R_{ft})^2 + \epsilon_{pt}$$

Where α , β and γ are the parameters of the model.

The parameters in the above model could be estimated by using standard regression methodology. TM has argued that a market forecaster will hold a greater proportion of the market portfolio when the return on the market is high and vice versa. Thus, a statistically significant positive value of γ_p (Gamma coefficient of the portfolio) would imply that the mutual fund manager possesses market timing skills. A negative value for γ_p is interpreted as a lack of ability of fund managers to time the market correctly. An insignificant value for γ_p can be interpreted as a lack of timing ability. If Alpha p is positive and significantly different from zero, then stock selection skills of the fund managers is identified, as in the security market line model.

The rationale behind the TM formulation is that when a fund manager is not engaged in market timing and concentrates only on stock selection, the average beta of the fund return against market return would be a straight line, thus, depicting a linear relationship. However, if the fund manager has changed the beta or cash position of the portfolio overtime, but has been unsuccessful in properly assessing the direction of the market the plotting would still show a linear relationship. The unsuccessful market timing activity of the fund manager would merely introduce an additional scatter to the plots around the fitted relationship.

Market timing is the macro-forecasting ability of the fund manager in forecasting market wide movements (e.g. a shift from a bull to bear market). Market timing skills imply assessing correctly the direction of the market, whether bull or bear and positioning the portfolios accordingly. Thus, market timing is defined as the strategy of changing a fund’s allocation between stocks and cash to capture gains in up markets and to avoid losses in down markets. In other words, market timers are special breed of technicians who track the market to enhance the yield return on stock or bond by investing during the periods of market upswing and switching into money market instruments when the market conditions are unfavorable.

The study states the following null hypothesis (i.e. H01 and H02) and corresponding alternative hypothesis (i.e. H1 and H2) for assessing the stock selectivity and market timing abilities of the mutual fund managers in India:

H01: Mutual Fund managers of the selected schemes in India lack stock selection abilities.

H1: Mutual Fund managers of the selected schemes in India have superior stock selection abilities.

H02: Mutual Fund managers of the selected schemes in India lack market timing abilities.

H2: Mutual Fund managers of the selected schemes in India display distant market timing abilities.

Results and Findings

The empirical results pertaining to selectivity and market timing abilities of fund managers of the sample of 20 mutual fund schemes comprising of 5 schemes each of Large Cap Fund, Diversified Fund, ELSS, Debt Long Term Fund and Balanced Fund of growth option measured by the Jensen Measure and the Treynor and Mazuy Model which have been presented in two sections.

Assessing Stock Selectivity using Jensen Measure

Michael C. Jensen proposed an absolute measure of performance in 1968 to evaluate the portfolio manager’s predictive ability i.e. the ability to achieve higher returns through successful prediction of security prices than expected for the given level of risk. It is the regression of excess fund return with excess market return. The intercept i.e. alpha (α) of the regression equation provides Jensen’s measure of the sample mutual fund schemes of growth options respectively.

The results of Jensen measure of the selected mutual fund schemes of growth/equity option respectively have been discussed in below Table 1.1.

TABLE 1.1
Results of Jensen Measure-Growth Option

1	2	3	4
S.No	Schemes	Alpha	t- Alpha
I	Large Cap Funds		
1	HDFC Equity Fund	0.011*	4.300
2	SBI Magnum Equity Fund	0.003	1.418
3	UTI Master Plus Unit Fund	0.000	-0.194
4	ICICI Pru Top 100 Fund	0.004*	2.069
II	Diversified Funds		
1	HDFC Capital Builder Fund	0.007*	2.333
2	Birla Sun life Buy India Fund	0.005	1.350

3	SBI Contra Fund	0.004	0.879
4	UTI Equity Fund	0.001	0.464
III	ELSS Funds		
1	HDFC Tax Saver Fund	0.009*	3.595
2	SBI Magnum Tax Gain Fund	0.008*	2.104
3	UTI Equity Tax Saving Plan Fund	0.004	0.287
4	ICICI Pru Tax Plan Fund	0.009*	2.239
IV	Debt Long Term Fund		
1	HDFC Income Fund	0.001	0.660
2	Birla Sun life Income Retail Plus Growth Fund	0.002	0.867
3	SBI Magnum Income Fund	0.000	-0.324
4	UTI Bond Fund	0.014	0.723
V	Balanced Fund		
1	HDFC Prudence Fund	0.009*	4.092
2	ICICI Prudence Balanced Fund	0.003	1.615
3	UTI Balanced Fund	0.003	0.595
4	Franklin Templeton Balanced Fund	0.004*	2.628

Note: * indicates statistical significance at the five percent level.

Interpretations

A close examination of the table 1.1 indicates that all of the schemes have posted positive alpha values in all the categories of all mutual funds. Out of the positive alpha values, the fund manager of two Large Cap Funds, one of Diversified Funds, two of ELSS, two of Balanced Funds in the growth option category have successfully generated significantly positive alpha values at five percent level of significance. This indicated that the fund managers of these schemes have shown superior selectivity performance (stock selection or micro forecasting skills) in India.

Assessing Stock Selection and Market Timing Abilities using Treynor and Mazuy (1966) Model

Treynor and Mazuy (1966) model has been used to detect both selectivity and market timing abilities of the fund managers of the sample mutual funds of growth/equity option. A statistically significant and positive value of alpha and gamma indicates positive stock selection and market timing skills among the fund managers respectively.

Table 1.2 presents the empirical results for the TM model of the sample mutual fund schemes of growth option respectively.

TABLE 1.2

Results of Treynor and Mazuy Model-Growth Option

1	2	3	4	5	6
S.No	Schemes	α	B	\square	R^2
I	Large Cap Funds				
1	HDFC Equity Fund	0.010* (3.664)	0.938* (29.345)	0.31 (0.135)	0.881
2	SBI Magnum Equity Fund	0.003 (1.234)	0.960* (37.115)	-0.002 (-0.009)	0.922
	UTI Master Plus Unit Fund	0.000	0.962*	-0.088	0.925

3		(.067)	(37.889)	(-0.481)	
4	ICICI Pru Top 100 Fund	0.008* (3.509)	0.957* (36.000)	-0.605* (-3.323)	0.916
II	Diversified Funds				
1	HDFC Capital Builder Fund	0.010* (2.643)	0.893* (21.421)	-0.368 (-1.235)	0.797
2	Birla Sun life Buy India Fund	0.006 (1.385)	0.837* (16.519)	-0.159 (-0.434)	0.700
3	SBI Contra Fund	0.005 (0.968)	0.825* (15.781)	-0.180 (-0.418)	0.680
4	UTI Equity Fund	0.003 (0.801)	0.918* (24.832)	-0.208 (-0.309)	0.841
III	ELSS Funds				
1	HDFC Tax Saver Fund	0.010* (3.458)	0.930* (27.146)	-0.168 (-0.023)	0.863
2	SBI Magnum Tax Gain Fund	0.010* (2.295)	0.893* (21.426)	-0.322 (-0.039)	0.0797
3	UTI Equity Tax Saving Plan Fund	-0.009 (-0.506)	0.488* (6.126)	2.199 (1.543)	0.258
4	ICICI Pru Tax Plan Fund	0.011* (2.368)	0.881* (20.020)	-0.313 (-0.856)	0.774
VI	Debt Long Term Fund				
1	HDFC Income Fund	0.002 (1.068)	0.126 (1.373)	-0.159 (-1.005)	0.023
2	Birla Sun life Income Retail Plus Growth Fund	0.003 (1.117)	0.024 (0.259)	-0.170 (-0.739)	0.005
3	SBI Magnum Income Fund	0.001 (0.470)	0.225* (2.521)	-0.234 (-1.536)	0.067
4	UTI Bond Fund	0.018 (0.792)	-0.018 (-0.190)	-0.615 (-0.334)	0.001
V	Balanced Fund				
1	HDFC Prudence Fund	0.010* (3.572)	0.907* (23.320)	-0.010 (-0.046)	0.823
2	ICICI Prudence Balanced Fund	0.007* (3.591)	0.940* (30.628)	-0.677* (-4.248)	0.890
3	UTI Balanced Fund	0.002 (0.418)	0.719* (11.196)	0.089 (0.202)	0.518
4	Franklin Templeton Balanced Fund	0.006* (3.422)	0.953* (33.794)	-0.316* (-2.229)	0.907

Note: Alpha (α) indicates the stock selection coefficient.

Gamma (β) indicates market timing coefficient

* indicates statistical significance at the five percent level.

Interpretations

An analysis of above table reveals that the fund managers of four of Large Cap Funds, four of diversified Funds, three of ELSS, four of Debt Long Term Funds and four of Balanced Funds in all of growth/equity option have generated positive alpha coefficients. While it was negative in case of one scheme of ELSS funds i.e. UTI Equity Fund. Out of the positive alpha coefficients, two of Large Cap Funds, one of Diversified Fund, three of ELSS and three of Balanced Funds in growth/equity option, were statistically significant at five percent level of significance indicating superior stock selection abilities of the fund managers of these schemes.

In order to test the market timing of fund managers, the coefficient gamma (γ) was found to be positive in case of the fund managers of only three schemes of growth/equity option (none was statistically significant), while it has been negative for the remaining fund managers of 17 growth/equity option schemes (of which 3 schemes of growth option were statistically significant). This indicates that none of the fund managers portrayed any market timing abilities as none of the sample schemes exhibited significantly positive gamma coefficient. However, there were three schemes of growth option, for which the gamma coefficients were found to be significant at five percent but these coefficients were in fact negative, thereby indicating that managers of these schemes were found to be engaged in timing activities but were doing so in the wrong direction. These schemes were ICICI Pru Top 100 Fund (Large Cap Fund), ICICI Prudence Balanced Fund and Franklin Templeton Balanced Fund (Balanced Fund). Thus, it was observed that the fund managers of 9 (statistically positive alphas) out of the 20 schemes of growth option have superior stock selection abilities. This provides some evidence to support the hypothesis that fund managers in India have selectivity abilities. The results reported, however, did not support that hypothesis that the fund managers in India display distinct market timing abilities because none of the sample schemes were depicting significantly positive values of gamma. Though, there was evidence that some of the schemes were timing the market in the wrong direction, as they have shown significant but negative gamma coefficients.

Table 1.3

Summary of Regression Results of Jenson Model as well as Treynor and Mazuy Model

Parameter Being Estimated	Jenson (1968) Model		TM (1966) Model	
	Positive*	Negative*	Positive*	Negative*
GROWTH OPTION				
Alpha(α)	20	0	11	0
Gamma(γ)	-	-	0	3

Note: The figures in Table 3.3 presents number of schemes out of the sample of 24 schemes of growth option which shows significant stock selection coefficient (α) and significant market timing coefficient (γ).

*indicates statistical significant at five percent level.

Summary and Conclusions

The present paper provides empirical results with regards to selectivity and market timing abilities of the fund managers of the sample of 20 mutual fund schemes of growth/equity option categorized in five parts i.e. Large Funds, Diversified Funds, ELSS, Debt Long Term Funds and Balanced Funds in terms of two models- the Jenson Measure and Treynor and Mazuy Model. Jenson Measure has been used to measure the stock selection ability of the fund managers in India. Positive and significant alpha value indicates superior stock selection ability of the fund managers. As demonstrated by Grinblatt and Titman (1989), Jenson's measure is not distorted if the fund manager is not a market timer. Therefore, to consider the effect of timing ability, Treynor and Mazuy Model have been used. The Treynor and Mazuy Model considers both selectivity and market timing skills of the fund managers. A positive and significant value of alpha and gamma indicates selectivity and market timing ability of the fund managers respectively.

The empirical evidence revealed that fund managers of the some of the sample fund schemes were engaged in micro forecasting (or stock selection), as the value alpha in case of 20 (100%) schemes of growth/equity option in terms of Jenson Measure and 11 (55%) schemes in Treynor and Mazuy Model were positive and statistically significant at five percent level. The top performers in case of Jenson Measure were UTI Bond Fund in Debt Long Term Fund, HDFC Equity Fund in Large Cap Funds, HDFC Capital Builder Fund in Diversified Funds, HDFC Tax Saver Fund in ELSS and HDFC Prudence Fund in Balanced Fund. Further the top performers in Treynor and Mazuy Model were UTI Bond Fund in Debt Long Term Fund, HDFC Equity Fund in Large Cap Funds, HDFC Capital Builder Fund in Diversified Funds, HDFC Tax Saver Fund in ELSS and HDFC Prudence Fund in Balanced Fund (Table 1.4).

Table 1.4

Top Performers in terms of Stock Selectivity

Growth/Equity Option	Jenson (1968) Measure	Treynor and Mazuy (1966) Model
Large Cap Fund	HDFC Equity Fund	HDFC Equity Fund
Diversified Fund	HDFC Capital Builder Fund	HDFC Capital Builder Fund
ELSS	HDFC Tax Saver Fund	HDFC Tax Saver Fund
Debt Long Term Fund	UTI Bond fund	UTI Bond fund

Balanced Fund	HDFC Prudence Fund	HDFC Prudence Fund
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However, none of the fund managers of the sample schemes were successful in exhibiting significantly positive value of gamma estimates, hence indicating that fund managers lack market timing skills. There was evidence that a few schemes were timing the market but in the wrong direction, as their gamma coefficients were significantly negative.

On the basis of the results, it can be concluded that the fund managers in India are not seriously engaged in any market timing activities and relied only on stock selection skills. So the alternative hypothesis that the fund managers in India have stock selection skills was accepted. But the hypothesis that the fund managers in India display distinct market timing skills was not accepted.

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