# STOCK SELECTION, MARKET TIMING AND MUTUAL FUND PERFORMANCE

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## ABSTRACT

*The professional fund management is expected to reward investors with higher returns for the risk that the funds are exposed to. The excess return that is result of superior stock selection and better market timing ability is the value that the fund management team adds to the investors. Thus, these two measures are important criteria for investors' investment decisions. This paper attempts to decompose the performance of 185 equity diversified mutual funds in India in to excess return resulting from the market timing ability and stock selection ability of the fund management team over ten years period, from2003 through 2013. Stock selection ability is measured by Fama's Selectivity measure and for timing ability is measured by Treynor-Mazuy model (1966) and Henriksson-Merton model (1981).The empirical results reported here reveal that mutual fund managers have not been able to demonstrate superior stock selection ability consistently over the ten years period of the study. We find that the stock selection ability has rewarded investors the most in initial period of the study. In recent years, very few funds have shown favorable stock selection. Examining market timing ability, results show that the fund managers have not been able to time the market to generate superior returns for their investors. This implies that there are other factors which influence fund performance.*

**Key Words:** Market Timing, Stock Selection, Treynor & Mazuy Model, Henriksson & Merton Model, Mutual Fund Performance

## INTRODUCTION

The Indian mutual fund industry, though small in comparison to the size of the Indian economy, offers Indian, and in some cases global investors, both big and small, an opportunity to invest safely and securely, at a bargain cost, in a varied range of securities, spread across a wide range of sectors and industries. In India, equity markets are volatile and common people are less aware about this market, therefore a question mark is put on the Equity markets liability on mutual funds; hence it is an important topic of research. Indian mutual fund industry has registered an amazing growth rate and has emerged as significant financial intermediary.

Market timing strategy in its simplest form can be explained as a strategy of choosing the right instant to invest. A portfolio is shaped in accordance with the co-movements of the market as whole, and in accordance with the price movements. This approach aims to predict whether the market will be bullish or bearish. The structure of the portfolio is shaped according to these predictions. An investor using this approach is trying to get the better off the market most of the time. In other words, this approach implies that an investor is forecasting the inclination of future market trends. Usually, this ability is associated to investment funds and managers.

Two of the pioneering models, usually discussed in the literature for market timing abilities of fund managers are Treynor-Mazuy (1966) and Henriksson-Merton (1981). Stock picking ability of fund managers can be estimated by Fama (1992)Selectivity Measure. The main emphasis of this study is on these three models, with an application on Indian Equity Diversified Standard Growth plans.

## LITERATURE REVIEW

Extensive research has been conducted in past to establish effects of Market Timing and Selectivity on Mutual Funds' performance. In India, performance assessment of Mutual Funds' has received huge attention from both managers and academicians.  Eddy Junarsin (2013) used data from 2003 to 2009, to study the characteristics of mutual fund holdings, and examine mutual fund performance with characteristic-based benchmarks. Junarsin employed two major databases: CRSP survivorship-biasfree mutual fund database and CRSP main database, and applied two approaches to test the hypotheses: Grinblatt and Titman's (1993)measure and Daniel et al.'s (1993)and Wermers (2000)benchmarks' characteristic selectivity, characteristic timing, and average style measures. She found out that the result of hypothesis as indicated by Grinblatt Titman measure were significant but negative. She concluded that fund managers do not have particular capability of outperforming benchmarks and Junarsin further stated that, overall, the test results are not in favor of the fund manager's ability.

Kumar (2012)studied monthly data of 28 equity diversified Indian fund schemes for the period from January 2007 to June 2011. He found out that, most of the funds were able to beat the benchmark markets. Superior results giving fund schemes were open to the elements of higher risk and were less affected by market risks. All the funds under his study were comparatively exposed to less risk than the market, but to a high degree of volatility. A majority of the funds were sensibly diversified and condensed the unique risk. As a result, unique risks and the returns were unconstructively associated. Kumar's study also said that, almost 58% of fund schemes were able to beat the market by stock picking ability. However, like Junarsin, Kumar also stated that as far as market timing is concerned, the fund managers were more or less unsuccessful both to buy stocks in

down market and to sell stocks in up market. That is, fund managers fail to take benefit of Market Timing.

Daniel et al. (1997)developed and applied new measures of portfolio performance that used benchmarks based on characteristics of stocks held by portfolios being evaluated. Based on these benchmarks, "Characteristic Timing" and "Characteristic Selectivity" measures were developed to identify respectively, whether portfolio managers can profitably time their portfolios and whether managers can pick stocks that do better than the common stocks having same characteristics. They used these measures on over 2500 equity funds and found out that, Mutual Funds, chiefly the growth funds, exhibit some selectivity ability, but these funds showed no timing ability.

Ferson and Haitao (2013), stated that, the investment results of portfolio managers depends on market conditions and volatility timing as well as stock selection. By their study they found out that, mutual funds with more vigorous responses to volatility have better results. Funds demonstrate more (less) ability to time market factor levels when an investor sentiment gauge is low (high). Labelling of funds by factor model R-squares and other evidence established their findings that the more active funds have superior results.

Juan C. Matall′ın-S′aez (2006)in his study of Mutual Fund Performance measured the results of assertively managed fund and compared them with benchmark that represents fund. In particular he studied the result on mutual fund assessment if a pertinent benchmark is absent. This effect was studied in three elements of dynamic management, that is, stock picking, market timing, and seasonality. The study was conducted for a sample of Spanish mutual funds, and Juan found that the keeping out of benchmarks, mainly that corresponding to small-cap stocks, leads to larger evidence of negative market timing and positive seasonality at year beginning.

Initial studies on fund performance such as Sharpe (1966), Treynor (1965) and Jensen (1968) used Capital Asset Pricing Model (CAPM) with a single benchmark for assessing performance. Treynor (1965)had related the performance and the risk measured through beta (systematic risk). By using the reward to volatility ratio he found that the funds did not perform better than benchmarks. Treynor and Mazuy (1966) attempted to study a fund manager's ability to time the market by using the quadratic Treynor and Mazuy model. They did not find any such evidence in the study of 57 funds for the period 1953-1962. Sharpe (1966)used the CAPM to gauge the fund results. He supposed that probable return of a fund and its risk ($S_p$) are linearly associated. He found that sampled funds underperform the Dow Jones Index for 34 open-ended funds during 1954-1963.

Jensen (1968) attempted to find the better stock picking ability. He studied 115 funds for the time period 1945-1959 and found that the fund managers are lacking such

expertise. Sharpe and Jensen seemed to authenticate the Efficient Market Thesis (EMT) which states that since security prices imitate all available information it is impossible to beat the market by active portfolio market (Fama, Efficient Capital Markets: A Review of Theory and Empirical Work, 1969).Though there has been wide research in the area of Market Timing, Selectivity and Mutual Fund Performance but still, researchers have not found any common ground to agree upon.

Stock picking ability of fund managers is still given some credence but market timing ability of fund managers and linked fund performance, remains a big question to be answered. The present study focuses on the Market Timing and Selectivity of Mutual Funds and tries to ascertain whether these can be used to gain superior results than market.

## OBJECTIVES

1. To find out whether Mutual fund managers are able to beat the market by their stock selection skills.
2. To find out whether market timing for mutual funds exists and if so, are fund managers able to time the market well.

## RESEARCH METHODOLOGY

### Research Design

**Scope:** Equity Diversified Large, Small, Multi and Medium sized Open-Ended Growth Mutual Funds running at least for last 3 years.

**Study Period:** September 2004 to June 2014.

**Data collection:** Data is collected from ACEMF for last 10 years from Sep 2004 to June 2014. Historical Quarterly Data is taken to do the analysis over the time period. Risk free rate is taken as 10Y G-sec bond for each quarter. Data for G-sec is taken from NSE G-Sec Index.

### Variables and Models

### Models

**Fama's Selectivity:** This model compares the results, calculated in terms of returns of a fund with the basic return corresponding with the total risk linked with it. The dissimilarity amongst these two is taken as a gauge of the performance of the fund and is known as *selectivity*. The *net selectivity* represents the stock selection skill of the fund manager, as it is the extra return in addition to the return required to pay off for the total risk taken by the fund manager. Higher value of selectivity indicates that fund manager has obtained better performance as compared to the performance

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corresponding with the level of risk taken by him. Hence, the Fama decomposition measure is written as:

Net Selectivity = (Rp – Rf) – Sp/Sm (Rm – Rf)

A positive high value of net selectivity represents that the fund has achieved better returns, and investors are benefited out of the stock picking ability of the fund manager.

**Market Timing:** Superior performance of the mutual fund managers occurs because of their ability to pile the stocks during down time and sell the stocks at correct uptime. Fund manager's ability to forecast the returns on individual assets helps in superior performance of the fund.

**Treynor and Mazuy Model:** Treynor and Mazuy (1966) has introduced the following model:

$(R_P - R_f) = a + B (R_m - R_f) + y (R_m - R_f)^2 + E_p$

Treynor and Mazuy explained that if a manager can predict market returns, he will clutch more of the market portfolio when the return on the market is high and a smaller fraction when the returns on the market are low. Thus, the portfolio performance will be a nonlinear function of market return. A positive Gamma value of indicates superior market timing skill.

**Henriksson and Merton Model:** This model proposed following equation to establish market timing ability of fund managers:

$(R_P - R_f) = a + B (R_m - R_f) + y [D(R_m - R_f)]+ E_p$

Where, *D* is a dummy variable

$$D = 0, \text{ if } (Rm > Rf) \text{ and,}$$
$$D = -1 \text{ otherwise}$$

In contrast to linear beta, portfolio beta in this model is assumed to toggle between the two betas. A huge value means that the market is likely to better perform, i.e., when *Rm >Rf* (up market), and a diminutive value means the opposite, i.e., *Rm <Rf* (down market). Consequently, it is said that a winning market timer would pick a high up market beta and a low down-market beta. A positive value of Gamma indicates superior market timing skill.

## EMPIRICAL RESULTS
### Stock Selection Ability

**Table 1: TnM, HnM and Fama Selectivity Measure for Large Cap Funds**

| Year | No. of Funds Exhibiting Positive Value | | |
|---|---|---|---|
| | **Fama Measure** | **TnM** | **HnM** |
| 2004 | 21/22 | 16/22 | 15/22 |
| 2008 | 37/40 | 38/40 | 25/40 |
| 2014 | 1/62 | 19/62 | 14/62 |

Table 1 presents Fama Selectivity measure for Large Cap Funds. The professional intelligence of the fund managers to select the undervalued stocks has been mixed as

far as the sampled mutual funds are concerned. Under large Cap Category 90% – 95% funds have recorded positive high value from September 2004to December 2007 but from Jan 2008 onwards till June 2014 all most all the funds have shown a negative value, except for 1% - 2% of funds which have shown positive value.

**Table 2: TnM, HnM and Fama Selectivity Measure for Mid Cap Funds**

| Year | No. of Funds Exhibiting Positive Value | | |
|---|---|---|---|
| | Fama Measure | TnM | HnM |
| 2004 | 5/6 | 5/6 | 5/6 |
| 2008 | 25/27 | 27/27 | 22/27 |
| 2014 | 4/36 | 0/36 | 2/36 |

Table 2 presents the measures of stock selection skill for Mid Cap Funds. In Mid Cap funds in Sep 2004, 91% of funds have positive value of Fama's Measure and in 2005 76.9% have high positive value. In the year 2009 positive selectivity measure drops to only 24% of the total funds. In 2010 and 2011 there are signs of improvement (around 60% of the funds have positive selectivity measure) but in 2014 positive Fama's selectivity is shown by only 5.4% of the funds.

**Table 3: TnM, HnM and Fama Selectivity Measure for Multi Cap Funds**

| Year | No. of Funds Exhibiting Positive Value | | |
|---|---|---|---|
| | Fama Measure | TnM | HnM |
| 2004 | 11/18 | 13/18 | 10/18 |
| 2008 | 23/44 | 38/44 | 32/44 |
| 2014 | 1/81 | 23/81 | 13/81 |

Table 3 presents the measures of stock selection skill for Multi Cap Funds. In Multi Cap funds, 49%-59% of the funds have positive Fama's selectivity measure from 2004 to 2008 but after 2008, number of funds showing good selection skills have dropped drastically. In 2014 only 0.62% of the funds have positive Fama's selectivity measure.

**Table 4: TnM, HnM and Fama Selectivity Measure for Small Cap Funds**

| Year | No. of Funds Exhibiting Positive Value | | |
|---|---|---|---|
| | Fama Measure | TnM | HnM |
| 2004 | 1/1 | 1/1 | 1/1 |
| 2008 | ¼ | 2/4 | 2/4 |
| 2014 | 0/5 | 4/5 | 3/5 |

Table 4 presents the measures of stock selection skill for Small Cap Funds. Whereas, large number of small Cap funds (>75%) have high Fama's measure value from 2004 to 2006 but after that from 2007 till 2013 (except 2009), only 22% - 25% of the funds have positive Fama's value and in 2014 none of the fund show positive value.

## Market Timing Ability

The timing of purchasing and selling the stocks is also important for the better performance of the fund schemes apart from stock picking ability. In this context, the **Treynor and Mazuy (TnM) model** has been estimated and a part of the results are presented in Tables 1, 2, 3 and 4. It seems from the tables that Indian fund managers'controlling the equity diversified schemes are not getting good results in timing the market in the recent past. For instance, out of 62 large cap funds sampled only 19 have recorded positive coefficient of Gamma in year 2014. Year 2008 has been an exception wherein all the funds show a positive Gamma value. In earlier years that is 2004-2005 almost 76% of the funds showed positive Gamma value but after 2009 the number of funds with good Gamma coefficient value has decreased drastically.

In Mid Cap range no fund shows positive gamma value in year 2014. In 2006 – 2007, 36% of the funds show positive Gamma value and in years 2011-2012 this value dropped to 27% of the total number of funds.In multi Cap funds, 23 out of 81 funds show positive Gamma value in year 2014 and 14 out of 81funds have positive Gamma value in year 2013. In 2008, 38 out of 44 funds exhibited positive Gamma value and in year 2004, 14 out of 18 funds have good Gamma coefficient.

In Small Cap funds category, 50% of the schemes show a positive Gamma value from 2004 to 2014, except for years 2009 and 2010. To substantiate the timing ability of the fund managers, **Henriksson and Merton (HnM) model** has beenestimated that take the up market beta (Rm > Rf) and the down market beta (Rm < Rf), and the part of result is presented in Tables 1, 2, 3 and 4.

Amongst large Cap funds most of the schemes have shown some market timing ability in period of 2004-2008 (on average 60% – 65%). But in year 2014 only 14 schemes out of 62 have shown a sufficiently positive coefficient value. In year 2008, 62.5% of the funds show positive coefficient value. In Mid Cap funds 2 out of 37 schemes have shown a positive coefficient value in year 2014 and in 2008 no fund show positive coefficient value. In 2004 5 out of 6 funds show positive coefficient value.In Multi Cap Funds, 16% of the funds show positive coefficient value in year 2014. Whereas, the number of funds showing positive coefficient value is 55% and 63% in years 2004 and 2008 respectively. In the Small Cap category, 3 out 5 funds show positive coefficient value in year 2014. In year 2008 2 out of 4 funds show positive coefficient value and in year 2004 1 out of 1 fund shows positive coefficient value.

## Regression Analysis (See table 5,6 and 7)

### Table 5: Regression Analysis Result for Large Cap Funds

| Year | Adjusted R Square | Regression Equation |
|------|-------------------|---------------------|
| 2004 | 81.23% | $y = 28.667 - 1360.04x_1 + 78.59x_2 - 0.00464x_3$<br>(-7.75)   (9.11)   (-0.057) |
| 2005 | 39.21% | $y = 8.10 + 236.49x_1 - 12.178x_2 - 1.18x_3$<br>(2.01)   (-0.75)   (-2.45) |
| 2006 | 74.32% | $y = 7.31 - 0.85x_1 + 0.96x_2 + 0.98x_3$<br>(-0.41)   (0.32)   (2.72) |
| 2007 | 28.86% | $y = 7.5 - 24.74x_1 + 19.32x_2 - 0.94x_3$<br>(-3.99)   (5)   (-7.7) |
| 2008 | 59.63% | $y = 15.03 - 65.64x_1 + 23.06x_2 - 0.21x_3$<br>(-8.14)   (8.42)   (-1.3) |
| 2009 | 93.38% | $y = -11.15 - 83.45x_1 + 12.30x_2 + 0.13x_3$<br>(-3.79)   (5.51)   (2.89) |
| 2010 | 97.39% | $y = -6.13 - 0.78x_1 + 1.89x_2 + 0.14x_3$<br>(-0.25)   (0.85)   (2.34) |
| 2011 | 79.87% | $y = 1.17 - 28.26x_1 + 20.40x_2 - 1.16x_3$<br>(-15.44)   (14.21)   (-7) |
| 2012 | 94.22% | $y = 3.51 + 72.38x_1 - 2.59x_2 + 0.84x_3$<br>(2.51)   (-1.2)   (40.35) |
| 2013 | 99.73% | $y = 8.30 + 0.03x_1 - 0.95x_2 + 1.19x_3$<br>(17.39)   (-17.5)   (286.34) |

### Table 6: Regression Analysis Result for Mid Cap Funds

| Year | Adjusted R Square | Regression Equation |
|------|-------------------|---------------------|
| 2004 | 70.58% | $y = 29.38 - 1243.87x_1 + 56.377x_2 + 0.72x_3$<br>(-4.179)   (4.45)   (4.467) |
| 2005 | 90.20% | $y = 10.15 - 398.358x_1 + 82x_2 - 3.32x_3$<br>(-5.10)   (6.85)   (-7.78) |
| 2006 | 76.73% | $y = 8.95 + 0.27x_1 - 0.36x_2 + 0.98x_3$<br>(0.14)   (-0.13)   (2.63) |
| 2007 | 80.32% | $y = 0.95 - 81.70x_1 + 59.94x_2 - 2.80x_3$<br>(-16.65)   (18.51)   (-16) |
| 2008 | 93.75% | $y = 14.89 - 110.937x_1 + 43.04x_2 - 1.85x_3$<br>(-15.98)   (15.85)   (-9.48) |
| 2009 | 89.69% | $y = -10.75 - 146.663x_1 + 21.26x_2 - 0.15x_3$<br>(-3.60)   (4.7)   (-1.52) |
| 2010 | 99.24% | $y = 7.84 + 1.52x_1 - 0.11x_2 + 0.34x_3$<br>(1.3)   (-0.13)   (13.68) |
| 2011 | 56.71% | $y = 0.53 - 8,75x_1 + 4,58x_2 + 0.70x_3$<br>(-6.3)   (4.41)   (4.59) |
| 2012 | 97.02% | $y = 3.22 + 15.20x_1 - 1.30x_2 + 0.87x_3$<br>(1.3)   (-1.49)   (55.62) |
| 2013 | 99.84% | $y = 8.25 + 0.027x_1 - 0.827x_2 + 1.16x_3$<br>(15.98)   (-16.03)   (234.71) |

**Table 7: Regression Analysis Result for Multi Cap Funds**

| Year | Adjusted R Square | Regression Equation |
|------|-------------------|---------------------|
| 2004 | 83.01% | $y = 26.69 - 710.86x_1 + 52.05x_2 + 0.13x_3$ <br> (-2.63)    (3.98)    (1.84) |
| 2005 | 63.71% | $y = 9.56 - 179.78x_1 + 53.73x_2 - 3.09x_3$ <br> (-1.85)    (3,56)    (5.63) |
| 2006 | 82.45% | $y = 8.99 - 8.83x_1 + 12.81x_2 - 0.51x_3$ <br> (-15.79)   (16.64)    (-6.78) |
| 2007 | 46.29% | $y = 5.48 - 49.56x_1 + 36.03x_2 - 1.56x_3$ <br> (-9.10)   (10.14)    (-10.44) |
| 2008 | 79.62% | $y = 15.26 - 91.33x_1 + 34.65x_2 - 1.15x_3$ <br> (-8.67)    (8.65)    (-4.13) |
| 2009 | 88.99% | $y = -10.34 + 19.18x_1 + 2.07x_2 + 0.29x_3$ <br> (0.52)    (0.53)    (3.58) |
| 2010 | 97.71% | $y = 6.3 - 4.41x_1 + 4.43x_2 + 0.13x_3$ <br> (-2.92)    (3.99)    (4.15) |
| 2011 | 60.35% | $y = 1.25 - 14.58x_1 + 9.84x_2 + 0.052x_3$ <br> (-10.19)    (9.17)    (0.49) |
| 2012 | 86.74% | $y = 2.32 - 62.56x_1 + 6.17x_2 + 0.75x_3$ <br> (-2.54)    (2.96)    (27.20 |
| 2013 | 99.71% | $y = 8.29 + 0.029x_1 - 0.87x_2 + 1.17x_3$ <br> (19.40)    (-19.51)   (297.52) |

Tables 5, 6 and 7 show the significance of the influence of Fama's selectivity measure, TnM market timing ability measure and HnM market timing ability measure on the mutual fund return.

For Large Cap Funds, from 2004 to 2013, Fund Returns are positively correlated with TnM measure in years 2005 and 2012 to 2013 with significant t-statistics and in years 2004, 2007, 2008, 2009 and 2011, Fund Returns are positively correlated with HnM measure with significant t-statistics. In years 2006, 2009, 2010 and 2012 to 2013, Fund Returns are positively correlated with Fama Selectivity measure with significant t-statistics.

In Mid Cap Funds, only in years 2012 and 2013 fund Returns are positively correlated to TnM measures' values with significant t-statistics. In years 2004, 2005, 2007 to 2009 and 2011 to 2013 fund Returns are positively correlated to HnM measures' values with significant t-statistics. In year 2004 and 2006 and from 2010 to 2013, Fund Returns are positively correlated with Fama Selectivity measure with significant t-statistics.

In Multi Cap Funds, from 2004 to 2008 Fund returns are better predicted by HnM Model than TnM or Fama Selectivity models. From 2009 onwards except for years 2010 and 2011 Fama selectivity appears to be a better measure.

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For Small Cap Funds, the sample size is very small as compared to other categories to comment justifiably. But still in these funds it appears that, Fama Selectivity measure has better predicted the Fund Returns as compared to TnM and HnM models.

## FINDINGS AND DISCUSSION

From the empirical results obtained for Large Cap Funds it is easy to interpret that majority of Large Cap Funds show good market selectivity and comparatively descent timing ability in initial period of 2004 to 2008. After recession of 2008 there is some improvement in year 2009 but matching to recent volatile times there are no signs of market timing and selectivity in recent past. Multi Cap Funds show average selectivity performance in initial 5 years (50%-60%) which further decreases after that, though the change in performance is not as drastic as in case of large cap funds. As far as timing ability is concerned, TnM model show decent timing abilities for these funds in initial years and HnM model show comparatively less timing ability during the same period. In Mid Cap Funds, Selectivity is high in initial years i.e., 2004-2005 and it decreases to average selectivity performance in years 2006-2008 wherein, half of the funds exhibit selectivity ability.  In recent past, after recession of year 2008 selectivity performance of funds have again improved in 2013 with more than 62% of the funds showing positive selection ability. But as far as market timing ability is concerned, these funds have failed to exhibit good timing ability from 2004-2014. In initial years market timing ability is exhibited by 26% to 34% of the funds, which decreases to as low as 0% in recent years. Small Cap Funds show a decent timing ability over the entire period from 2004-2014 except for year 2008. On an average 50% of small Cap Funds exhibit timing ability. But stock selection ability of these funds is no better than other categories. On an average, around 25% of such funds exhibit selection ability.

It is clear from the analysis that though there exist selection ability and timing ability in initial years i.e., from 2004-2007, but since recession year i.e., year 2008, fund managers have failed to achieve superior performance to beat market benchmark. Fund managers have not been able to book overtly high returns during boom period neither they are able to glide through volatile times. It is evident from the study that fund performance cannot be completely determined from timing and selectivity ability only and there are other factors also which influences fund performances. This implies if there are other factors which determine fund returns to a greater extent than such factors should be studied.

It is to be noted from regression analysis that, HnM and TnM measures' behaviour is found to be contradictory in estimating better Fund Returns and this is in confirmation with the existing literature.

## CONCLUSION

This study has been conducted to assess equity diversified mutual fund schemes between September 2004 and June 2014. An effort has been made to assess the funds' performance through manager's capability to select the right stocks and to time the market. The study reveals that mutual fund schemes are not able to beat the market by stock selection skills in recent times. Though, during boom period many schemes were able to beat the market index. As far as timing the market is concerned, the fund managers almost failed both to book higher returns in the up market and mount up the stock in the down market. Both the models used to study the timing ability of the fund managers did not reveal any such capability in this front, with HnM model being stricter in this matter than TnM model.

Many schemes showed good timing ability in initial years like from 2004-2007 but, they have failed to maintain same pace after the recession period. This implies lack of perseverance in fund management skills. Absence of market timing ability also raises serious concern about the fund management expenses incurred by the asset management companies. Investors must question about the fact that if fund managers are not able to time the market to generate additional return, is the expense ratio of these funds justified. Investors may consider funds with lower turnover and lower expense ratios. Investors may also consider funds that mimic the broader index because active management does not seem to reward them for the additional risk exposure.

Lack of market timing ability of the mutual fund managers gives lead to another research problem that if fund managers are not able to time the market for higher returns, which other factors the investors should consider while selecting funds for investment.

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