



Timing Abilities of Mutual Fund Managers in India- A Case Study of SBI Mutual Funds

Rajib Deb¹

¹*Academic Counsellor, Indira Gandhi National Open University (IGNOU), New Delhi*

Abstract

Mutual funds play as a key investment method for investors. It provides safe and systematic avenues by which investors can reduce their risk through risk diversification features. In today's volatile market scenario, the mutual fund is a suitable sector for investors as compared to other investment options. In India, the MF industry has been functioning for more than five decades (Sehgal & Babbar, 2017). Since the emergence of the Indian Capital Market and the deregulation of the economy in 1992, it has undergone significant transformations with many fluctuations. There have been fundamental changes in both the primary and secondary markets since that year. The study has empirically analyzed Indian fund managers' market timing and selectivity skills abilities of public sector bank-sponsored schemes by utilizing two popular models. The two models analyze the return-based timing abilities of fund managers. The fund managers' market timing abilities are crucial in bringing equity mutual funds' superior financial performance. A manager can show up timing skills if they predict the stock market's direction using suitable techniques and select the portfolio to add value to the mutual fund. The results from

both models suggested that fund managers cannot time the market correctly; instead, they go in the wrong direction.

Keywords: *Mutual Funds, Timing and Selectivity Skill, SBI Mutual Fund, Fund Manager*

1. Introduction

Mutual funds play as a key investment method for investors. It provides safe and systematic avenues by which investors can reduce their risk through risk diversification features. In today's volatile market scenario, the mutual fund is a suitable sector for investors as compared to other investment options. In India, the MF industry has been functioning for more than five decades (Sehgal & Babbar, 2017). Since the emergence of the Indian Capital Market and the deregulation of the economy in 1992, it has undergone significant transformations with many fluctuations. There have been fundamental changes in both the primary and secondary markets since that year. Mutual Funds are vital contributors to the globalization of financial markets and serve as one of the primary sources for capital inflows into developing economies (Klapper et al., 2004). As implied by its name, Mutual Funds consist of many investors who pool their resources to invest in various fund schemes. Mutual Funds are essential to an economy as they aggregate savings and deploy them in the capital market, thereby creating a connection between savings and the capital market (Y. C. Chen et al., 2011). Stock selection involves making informed predictions about market price movements based on expertise and experience.

Mutual funds operate based on two principles: maximizing returns and diversifying risk, both of which necessitate sound operational practices and effective investment management. Systematic investment management entails various activities, including selecting stocks, allocating assets, managing investment styles, and timing the market (R. Deb & Panja, 2022).

The MF industry has the most upward trend in recent times for the development of new and existing mutual fund companies. The development also takes place by way of increasing foreign-owned mutual fund companies. The nationalized banks which have started operation in mutual funds in the early nineties become successful for the stock market boom afterward. Due to its growing demand, it becomes pertinent to judge mutual funds' performance before making any investments.

Performance measurement of mutual funds has been creating an interest among the academic and professional for the last few decades. It is happening as the mutual fund industry boosts its expansion and its association with the efficient market hypothesis. Investors get an advantage out of the repeated evaluation of fund performance, and they can know the ability of fund managers in terms of value addition or reduction in their portfolio management by the managers (Zabiulla, 2014).

In today's world, effectively timing the market plays a crucial role in making investment decisions. Fund managers can achieve better returns by accurately timing the market, alongside their stock selection strategies. Therefore, though not just micro-level forecasting but also broader market timing approaches, a skilled fund manager can yield exceptional returns amidst fluctuating stock markets. As a result, examining the presence and level of these two skills in Indian mutual fund managers is crucial to deliver superior performance.

It is a well-known fact that, like developed countries, the mutual fund industry is also one of the fast-growing sectors in India since the injection of economic reforms in 1991. The development of the sectors also creates difficulties for the number of investors in selecting suitable schemes as there are more than 2,500 schemes as of March 2019. Another risk associated with the fund managers whose single wrong decision may also put the investors in a financial crisis. The present study shows an insight into fund managers' timing abilities by considering SBI mutual Fund schemes. The study has empirically tested Indian fund managers' market timing abilities by utilizing two popular models, Treynor & Mazuy Model, Henriksson & Merton Model, and other indices. The two models analyze the return-based timing capabilities of managers. The fund managers' market timing abilities are crucial in bringing equity mutual funds' superior financial performance.

1.1 Backgrounds

The history and development of mutual funds can be divided into discrete phases, each of which can be identified by significant advancements, modifications to regulations, and changes in investor opinion (Roy & Ghosh, 2013). These stages show how the business has grown and how mutual funds have evolved from specialized to popular investment solutions. Below is a breakdown of the stages of mutual fund development in India:

Phase 1: The Initial Years – Pre-1987

UTI Monopoly's Early Years, Before 1987:

The concept of mutual funds originated in India in 1963 when the Unit Trust of India (UTI) was established by a parliamentary legislation.

Before the Industrial Development Bank of India (IDBI) took over in 1978, the Reserve Bank of India (RBI) was in charge of UTI's founding and management. During this period, UTI was the only player in the Indian mutual fund industry, creating a monopoly that lasted for nearly two decades. Unit Plans: The first mutual fund scheme ever created by UTI, Unit Scheme 1964 (US-64), was a flagship product that offered the benefits of mutual fund investing to the Indian people. It was designed to provide both income and capital growth, and it became very popular.

Assured Dividends and High profits: US-64, which emphasized fixed-income securities, drew investors with the promise of assured dividends and high profits. The plan established the standard for mutual fund products in the future, but UTI eventually encountered difficulties in handling the guaranteed return.

Limited Access and knowledge: Mutual fund knowledge was low, and UTI's reach was restricted. The mutual fund industry remained little and mostly unknown to most Indians outside of major cities due to the lack of competition.

Phase 2: Entry of Public Sector Funds – 1987–1993

Breaking of Monopoly and Increase in Competition:

UTI's dominance in the Indian mutual fund industry came to an end during the second phase. The government allowed public sector banks and insurance companies to create mutual funds in 1987, which improved competition and expanded the selection of products offered.

Public Sector Funds: A number of public sector entities, including the State Bank of India, Life Insurance Corporation (LIC), and General Insurance Corporation (GIC), launched their own mutual fund programs.

As a result, individual investors across the country now have easier access to mutual funds. Diverse Fund Offerings: The

newcomers provided a number of previously restricted equity and balanced fund designs. This helped investors diversify their investments and introduced them to a variety of mutual fund types.

Growth in Market Penetration: As the number of companies and product options increased, investors started to take greater interest in mutual funds. The industry was growing even if there was still a lack of awareness.

But as the market grew and changed, the mutual fund business still lacked a thorough regulatory structure, which would become essential.

Phase 3: The Birth of a Regulatory Framework – 1993–1996

SEBI's Arrival and Private Sector Involvement:

SEBI Regulation: With the release of the Mutual Fund Regulations in 1993, the Securities and Exchange Board of India (SEBI) created a formal regulatory framework for mutual funds. The primary goals of the regulations were to safeguard investor interests, improve corporate governance in mutual funds, and increase transparency.

Private Sector Fund Entry: Major financial institutions and investment firms entered the market because of SEBI's laws encouraging private sector corporations to set up mutual funds. Examples were ICICI Prudential, HDFC, and Kothari Pioneer Mutual Fund, the first private fund to register with SEBI.

Product Innovation: As private companies entered the market, they brought new fund categories, aggressive marketing strategies, and a competitive approach to portfolio management. Funds provided a wider range of investment options, such as debt funds, sectoral funds, and balanced funds, allowing investors to select funds that matched their financial objectives and risk tolerance.

As competition grew, mutual fund companies enhanced their performance, transparency, and customer services, which in turn increased investor confidence.

Phase 4: Market Expansion and Growth – 1997–2003

Development and Challenges:

Mutual fund assets and investor interest increased significantly in the late 1990s. However, because of internal issues and macroeconomic reasons, the market experienced both highs and lows throughout this time.

Growing Interest in Equity Funds: Equity-oriented mutual funds became more well-liked by investors looking for larger returns after the private sector entered the market. The potential advantages of equity investments became more widely known to investors. **Growth in Assets Under Management (AUM):** Despite difficulties, the AUM of mutual funds continued to grow, reflecting rising investor interest. New investors entered the market, driven by innovative schemes and aggressive marketing campaigns by both public and private players.

The US-64 Crisis: In 2001, UTI faced a significant crisis with its flagship scheme, US-64, because of years of offering assured returns without aligning the scheme's investment strategies. This led to significant losses, forcing UTI to halt redemptions and restructure the scheme, which affected investor sentiment.

AMFI Formation: A major step towards industry self-regulation was taken in 1995 with the founding of the Association of Mutual Funds in India (AMFI). AMFI sought to improve investor education, encourage best practices, and raise ethical standards.

The US-64 crisis served as a wake-up call, emphasizing the necessity of stricter regulatory compliance and risk management. The industry's growth trajectory was unaffected by the crisis, nevertheless, as investors continued to be drawn to mutual funds because of their prospective rewards.

Phase 5: Consolidation and Reform – 2003–2008

Strengthening of Regulations and Rapid Expansion:

This phase was characterized by important reforms that helped consolidate the mutual fund business, establish investor confidence, and stimulate higher participation

UTI's Restructuring: In 2003, UTI was split up into two distinct companies: UTI Mutual Fund, which was regulated by SEBI, and the Specified Undertaking of UTI (SUUTI), which handled non-performing assets. The goal of this reorganization was to boost investor trust following the US-64 crisis.

New Schemes and Financial Innovations: Systematic Investment Plans (SIPs), which allowed investors to make recurring investments with lesser sums, were developed by mutual fund providers. This made mutual funds more accessible to individual investors. SIPs transformed the market by lowering the cost and increasing the convenience of equity market investing.

Phase 6: Global Financial Crisis and Resilience – 2008–2014

Adapting to Economic Turbulence and Investor Protection Measures:

The 2008 global financial crisis had a significant effect on global financial markets, particularly the mutual fund sector in India. Indian mutual funds' durability was put to the test during the crisis, and regulatory measures were taken to safeguard investors.

The 2008 Crisis's Effect: As global stock markets crashed during the crisis, the NAVs of equities mutual funds fell precipitously. Although there was volatility in debt funds as well, the mutual fund sector showed resiliency, as evidenced by the ensuing years' AUM recovery. **Direct Plan Introduction:** In 2013, SEBI required mutual funds to implement direct plans, which let investors make direct investments in mutual funds without having to pay distributor charges. This enhanced openness, reduced expenses for investors, and promoted the development of long-term wealth. **Emphasis on Transparency and Investor Education:** In order to promote informed decision-making, SEBI and AMFI stepped up their efforts to educate investors about mutual funds.

The sector became more transparent as a result of stronger rules on fund performance reporting and improved disclosure standards.

By reviving investor trust, these regulatory changes aided mutual funds in their recovery from the financial crisis. The crisis marked a sea change, and the sector came out stronger and more open.

Phase 7: Digital Transformation and Retail Boom – 2015–Present

Tech-Driven Growth and Financial Inclusion:

The most recent phase of mutual fund evolution in India has been marked by rapid digital transformation and a considerable increase in retail investor engagement, driven by technical breakthroughs and regulatory changes.

Digital Platforms and Easy Investing: The rise of robo-advisors, smartphone apps, and digital investment platforms has made mutual funds more accessible than before. The simplicity with which individuals can now invest, monitor, and remove their mutual fund assets is encouraging a new generation of retail investors to enter the industry.

Growth of SIPs and Retail Participation: SIPs are a disciplined and reasonably priced way to invest in the equity markets, and they have grown incredibly popular, particularly among young and novice investors. SIP accounts have increased dramatically, making a substantial contribution to the industry's AUM.

Investor Protection Measures: SEBI has persisted in enacting changes that are focused on investors, such as capping expense ratios, curbing mis selling, and strengthening rules pertaining to fund advertising and product labelling. The credibility of the sector has been further enhanced by such actions.

Growth in Mutual Fund Offerings: Funds are becoming more specialized to satisfy investor objectives, and retirement funds, sector funds, and thematic funds are becoming more prevalent. Additionally popular are index funds and exchange-traded funds (ETFs), which provide cost-effect.

1.2 A brief background of the selected AMC

SBI Mutual Fund is one of India's largest and most trusted asset management companies. It was established in June 1987 as a joint venture between: State Bank of India (SBI) – India's largest and oldest public-sector bank and AMUNDI Asset Management – a leading European asset management company

The fund house operates under SBI Funds Management Ltd. (SBIFML), with SBI holding a majority stake (Gupta et al., 2008).

Key Highlights

- First public sector mutual fund in India, launched under SBI's sponsorship.
- Offers a diverse portfolio of schemes including equity, debt, hybrid, index funds, ETFs, and offshore funds.
- Manages assets for retail investors, HNIs, corporates, and institutions.
- Known for its strong research base, risk management framework, and long-term investment philosophy.
- Has a pan-India network leveraging SBI's banking presence and wide distribution channels.
- Continuously introduces investor-awareness initiatives to promote financial literacy.

1.3 Rational of the Study

The reason behind for assessing the timing and selection skills of mutual fund managers in India is, with the growing significance of mutual funds in the Indian financial landscape, it is essential to comprehend the factors influencing fund performance for both investors and regulators. In particular, separating the effects of market timing and security selection skills enables a more detailed assessment of manager competence and guides investment choices. The distinct features of the Indian market, such as its regulatory environment, investor behavior, and market fluctuations, require a customized approach for evaluating these capabilities.

2. Review of Literature

The empirical literature has witnessed several indices and studies relating to mutual fund development. The pioneering approach Sharpe index (1966), Treynor index (1965) & Jensen measure (1968) are the most important. These indices are all based on the CAPM model. There has been growing curiosity or urge among the investors and in the financial literature about skills among the mutual fund managers. The earlier literature (Treynor & Mazuy, 1966);(Henriksson & Merton, 1981);(Jensen, 1968);(Grinblatt & Titman, 1992); (Chang & Lewellen, 1984) witnessed fund manager's insignificant timing skills. The pioneering studies include (Chang & Lewellen, 1984) on mutual fund investment performance and market timing. The authors used a parametric approach to test the market timing and selection skills in a sample of mutual funds during the 1970s. The study found no skillful market timing and apparent security selection abilities. market timing and selection performance using the Treynor-Mazuy model. Their study revealed a positive and significant timing ability for 633 funds during the 1984-94 periods. The study also found a positive and negative relationship between turnover and market, turnover and selectivity respectively.

Indian literature also witnessed studies related to the fund manager's abilities. (N. P. Tripathy, 2006) had one study where fund managers' market timing abilities belonged to India's thirty-one tax planning schemes were evaluated. The study found that managers did not reap market returns; instead, they mistimed the market. To research the timing and selectivity

abilities of Indian mutual fund managers, (S. G. Deb & Banerjee, 2007) used conditional and unconditional approaches. They had confirmed that in the case of unconditional models out of 768 possible cases, at a 10 percent level of significance, there were only four instances of substantial positive market timing. However, for unfavorable market timing, the results remain high, as only 133 in a total of 768 cases have significant market timing at a 5 percent significance level. Bantwa & Bhuva (2012) studied some selected equity diversified schemes and found the outperformance of all schemes except one scheme from the sample in terms of the risk- adjusted measure. Adequate diversification was found among the schemes with a negative correlation between diversification levels, measured by R². Prasad & Srinivas (2012) also studied Indian fund managers' timing abilities related to seventeen equity schemes using the T&M and H&M model. The study found a successful timing performance of managers to get returns over the market.

A similar study (Bodla, 2012) & (Chen et al., 2013) analyzed timing and selectivity skills using the H & M model and the conditional approach of the T&M and H&M models. The latter study found a positive side of the mutual fund, which shows Indian mutual funds can compensate the investors for taking additional risks by investing in mutual funds. Most of the selected managers do not implicate market timing ability in Indian and Taiwanese cases;

instead, they rely a little on stock selection. Again, another study was done by (Skrinjaric, 2013), who is a Croatian author on the market timing ability resulted in no timing ability of Croatian fund managers like earlier studies. The author also used Treynor-Mazuy and Henriksson-Merton's framework for the analysis.

The study (Kumar, 2016) confirmed that the Indian mutual fund industry could beat the benchmark market's return performance. However, although it is to be suggested for the investors, about 8 percent of such schemes failed to beat the market performance. Hence, the fund scheme selection deserves to be given the utmost consideration. They also stated that Indian mutual funds do have the ability of stock selection. But they are devoid of market timing ability.

3. Objectives of the study

1. To know the ability of the fund managers to beat the market by their stock selection skills.
2. To know if the fund manager able to time the market well.

4. Research Methodology

The current study uses secondary data that have been collected for public sector bank- sponsored schemes. Daily Net Assets Value (NAV) has been used as raw data for analyses purpose. The required NAV for the work period has been collected from the individual company's websites and other websites like Morningstar India, Amfi India, and BlueChip India. The benchmark data collected from the NSE website. For the risk-free rate of interest, RBI 91 days Treasury Bills has been used (Bodla, 2012); (N. P. Tripathy, 2006); (N. Tripathy, 2017); (Goel & Mani, 2018).

The current work has been covered the study period of three years from 1st April 2020 to 31st March 2023. The study will be carried out using the timing and selectivity measures which are mentioned below.

The study considers open-ended equity public sector funds in India. The sample has been obtained from SBI Funds Management Pvt. Ltd. The following criteria have been used for sampling, like data availability for the whole period, open-ended schemes, high resources mobilization, bank-sponsored mutual funds. Based on sampling criteria, 13 (thirteen) mutual funds have been collected. The summary of the sample schemes is provided in Table 1.

Table 1: Summary of Sample Schemes

SF 01	SBI Blue Chip Fund (G)	23-Dec-05
SF 02	SBI Contra Fund (G)	14-Jul-99
SF 03	SBI Focused Equity Fund (G)	23-Aug-04
SF 04	SBI Healthcare Opportunities Fund(G)	16-Dec-04
SF 05	SBI Infrastructure Fund(G)	06-Jul-07
SF 06	SBI Large and Midcap Fund(G)	27-Apr-05
SF 07	SBI Magnum Comma Fund (G)	30-Jun-05
SF 08	SBI ESG Exclusionary Strategy Fund (G)	29-Oct-93

SF 09	SBI Mag. Global Fund(G)	06-Jun-05
SF 10	SBI Mag. Midcap Fund(G)	21-Feb-05
SF 11	SBI Flexicap Fund (G)	22-Aug-05
SF 12	SBI PSU Fund(G)	17-May-10
SF 13	SBI Small Cap Fund(G)	27-Jul-09

In the context of methodology, various techniques are employed to evaluate the risk- adjusted performance as well as the timing and selectivity skills of Indian fund managers.

Metrics such as average return, standard deviation, portfolio beta, has been determined to assess their real return, risk, and level of diversification. Following the needs of the above objectives, the following tools are used for the analysis purpose:

NAV Returns (Daily basis)

It is the present market value of holding a fund, minus the fund's obligations. The following formula has been used to find the average NAV returns.

$$R_p = \left[\frac{NAV_t - NAV_{t-1}}{NAV_{t-1}} \times 100 \right]$$

Where, R_p = Portfolio returns in period 't'

NAV_t = Net Asset Value in period 't'

NAV_{t-1} = Net Asset Value in period '(t-1)'

Market Return

The difference between the two consecutive periods' market indices is divided by the market index for the beginning period. In this study, the S&P BSE SENSEX index has been used as a benchmark as it is India's most tracked index.

The market return has calculated as follows;

$$R_m = \left[\frac{Mi_t - Mi_{t-1}}{Mi_{t-1}} \times 100 \right]$$

R_m = Market return

Mi_t = Market index at the end

Mi_{t-1} = Market index at the beginning

Risk-free Rate

The rate is generated on risk-free instruments like bank deposits, government bonds, and treasury bills.

Treynor & Mazuy Model

Treynor & Mazuy(1966) developed the following model. They clarified that if a manager can forecast market returns, he will clutch more of the market portfolio when the market return is high and a smaller fraction when the returns on the market are low. The output of the portfolio will, therefore, be a nonlinear market return function. A positive gamma value indicates superior market timing skills.

$$(R_p - R_f) = \alpha + \beta(R_m - R_f) + \gamma(R_m - R_f)^2 + \varepsilon_t$$

Where;

R_p = Return on funds

R_f = Risk-free returns

R_m = Returns on the market portfolio

ε_t = Random or error term

α, β, γ are the parameters of the model

Henriksson & Merton Model

A similar but simplified model was introduced by (Henriksson & Merton, 1981) to test the fund manager's market timing skills. They presumed those market timers are needed to predict whether market returns are greater than or equal to risk-free rate (down markets) and if the market is expected to do well, pick a fund beta as a large value. A fund manager, a good market timer, was therefore expected to choose a high up-market beta and a low down market beta as per this model. Mathematically, they describe such a relationship via regression equations involving a dummy variable.

$$(R_p - R_f) = \alpha + \beta(R_m - R_f) + \gamma(D(R_m - R_f)) + \varepsilon_t$$

Where,

R_p = Return on funds

R_f = Risk-free returns

R_m = Returns on the market portfolio

ε_t = Random or error term D =Dummy variable

$D=0$, if $(R_m > R_f)$ and $D=-1$

otherwise. α, β, γ are parameters of the model.

5. Results and Discussion

The below section provides a detailed analysis of the results that have been generated from the two-timing models.

Table 2: Summary of TMs Model

Fund's Name	β	Std. Error	t Stat	γ	Std. Error	t Stat	R ²
SBI Blue Chip Fund (G)	0.784	0.012	63.997	-0.030	0.007	-4.501*	0.710
SBI Contra Fund (G)	0.757	0.014	54.877	-0.035	0.008	-4.628*	0.644
SBI Focused Equity Fund(G)	0.559	0.016	34.827	-0.062	0.009	-7.036*	0.435
SBI Healthcare Oppo. Fund(G)	0.569	0.024	23.272	-0.071	0.013	-5.345*	0.259
SBI Infrastructure Fund (G)	0.866	0.021	41.633	-0.031	0.011	-2.699	0.5089
SBI Large and Midcap Fund (G)	0.796	0.014	55.122	-0.045	0.008	-5.723*	0.648
SBI Magnum Comma Fund (G)	0.842	0.021	41.061	-0.059	0.011	-5.222*	0.508
SBI Magnum Equity ESG Fund (G)	0.842	0.012	67.618	-0.015	0.007	-2.167*	0.730
SBI Magnum Global Fund (G)	0.506	0.015	34.003	-0.058	0.008	-7.156	0.425
SBI Magnum Midcap Fund (G)	0.617	0.018	35.271	-0.072	0.010	-7.554	0.443
SBI Magnum Multicap Fund (G)	0.797	0.014	58.820	-0.043	0.007	-5.827*	0.677
SBI PSU Fund (G)	0.874	0.022	40.357	-0.043	0.012	-3.621	0.495
SBI Small Cap Fund (G)	0.666	0.021	32.225	-0.069	0.011	-6.143*	0.396

Source: Authors' compilation

*significant at 5% level

Table 2 presents the empirical results for the Treynor and Mazuy model. The table shows that none of the schemes show market timing indications out of the total mutual fund schemes. Most of the scheme's t-values are significant at the five percent level but

are negative. So based on the output of the Treynor and Mazuy model, we can say that for the sampled schemes, fund managers do not seem to be engaged in market timing activities; instead, fund managers time the market in the wrong direction.

Table 3: Summary of HMs Model

Fund's Name	β	Std. Error	t Stat	γ	Std. Error	t Stat	R ²
SBI Blue Chip Fund (G)	0.862	0.022	39.758	-0.148	0.037	-4.044*	0.710
SBI Contra Fund (G)	0.850	0.024	34.839	-0.177	0.041	-4.309*	0.644
SBI Focused Equity Fund(G)	0.732	0.028	25.803	-0.331	0.048	-6.922*	0.435
SBI Healthcare Oppo. Fund(G)	0.747	0.043	17.254	-0.337	0.073	-4.624	0.256
SBI Infrastructure Fund (G)	0.962	0.037	26.172	-0.184	0.062	-2.973*	0.509
SBI Large and Midcap Fund (G)	0.911	0.026	35.639	-0.219	0.043	-5.081*	0.647
SBI Magnum Comma Fund (G)	0.989	0.036	27.232	-0.278	0.061	-4.546*	0.506
SBI Magnum Equity ESG Fund (G)	0.875	0.022	39.720	-0.061	0.037	-1.652*	0.730
SBI Magnum Global Fund (G)	0.664	0.026	25.179	-0.299	0.044	-6.750*	0.423
SBI Magnum Midcap Fund (G)	0.815	0.031	26.309	-0.376	0.052	-7.218*	0.441
SBI Magnum Multicap Fund (G)	0.914	0.024	38.165	-0.224	0.040	-5.559*	0.676
SBI PSU Fund (G)	0.972	0.038	25.362	-0.184	0.065	-2.858*	0.494
SBI Small Cap Fund (G)	0.883	0.036	24.203	-0.415	0.061	-6.764	0.399

Source: Authors' compilation

*significant at 5% level

Table 3 depicted the Henriksson and Merton model results, where none of the sample schemes showed market timing skills. All the schemes under observation exhibited the wrong market timing abilities of fund managers. Based on both models, it is pretty clear that none of the schemes has shown market timing abilities. The empirical results do not support the hypothesis that the selected AMC's fund managers can time the market. These results are similar to studies (Rijwani, 2014);(Alam et al., 2014); (N. P. Tripathy, 2006);(S & Padmasani, 2013);(Ramesh & Dhume, 2014). Researchers have utilized other categories of Indian mutual funds data from time to time. So, it is to be said that none of the schemes has rewarded the investors and the main reason is the incapability of portfolio managers who couldn't book the profits at the boom phase of the market.

6. Conclusion

The study has empirically analyzed Indian fund managers' market timing abilities of public sector bank-sponsored schemes by utilizing two popular models. The two models analyze the return-based timing abilities of fund managers. The fund managers' market timing abilities are crucial in bringing equity mutual funds' superior financial performance. A manager can show up timing skills if they predict the stock market's direction using suitable techniques and select the portfolio to add value to the mutual fund. The results from both models suggested that fund managers cannot time the market correctly; instead, they go in the wrong direction. Other than the timing abilities of managers, a few mutual fund issues may also consider in future studies, like mutual fund abuses, poor trade execution, etc.

7. References

- Bantwa, A., & Bhuva, K. (2012). Performance Evaluation of Selected India Equity Diversified Mutual Fund Schemes: An Empirical Study. *GJRIM*, 2(2), 1-24.
- Bodla, B. S. (2012). Market Timing and Selectivity Skills of Mutual Fund Managers in India : An Empirical Study of Equity Funds. *XIII Annual International Conference on Global Turbulence: Challenges & Opportunities May*, 1-13.
- Chang, E. C., & Lewellen, W. G. (1984a). Market Timing and Mutual Fund Investment Performance. *The Journal of Business*, 57(1), 57. <https://doi.org/10.1086/296224>

- Chang, E. C., & Lewellen, W. G. (1984b). Market Timing and Mutual Fund Investment Performance. *The Journal of Business*. <https://doi.org/10.1086/296224>
- Chen, D.-H., Chuang, C.-L., Lin, J.-R., & Lan, C.-L. (2013). Market Timing and Stock Selection Ability of Mutual Fund Managers in Taiwan : Applying The Traditional and Conditional Approaches. *International Research Journal of Applied Finance*, IV(1). <https://www.researchgate.net/publication/259472460%0AMarket>
- Chen, Y. C., Chiu, Y. H., & Li, M. C. (2011). Mutual Fund Performance Evaluation - Application of System BCC model. *South African Journal of Economics*, 79(1), 1–16. <https://doi.org/10.1111/j.1813-6982.2011.01263.x>
- Deb, R., & Panja, S. (2022). PERFORMANCE MEASUREMENT OF BANK-SPONSORED FUNDS: A CONVENTIONAL APPROACH. *Journal of Commerce & Accounting Research*, 11(4), 74–88.
- Deb, S. G., & Banerjee, A. (2007). *Market Timing and Stock Selection Ability of Mutual Funds in India : An Empirical Investigation*. April. <https://doi.org/10.1177/0256090920070204>
- Goel, S., & Mani, M. (2018). Efficiency measurement of open-ended mutual fund schemes with respect to Indian mutual fund industry. *International Journal of Financial Services Management*, 9(2), 140. <https://doi.org/10.1504/ijfsm.2018.10014033>
- Grinblatt, M., & Titman, S. (1992). American Finance Association The Persistence of Mutual Fund Performance Author (s): Mark Grinblatt and Sheridan Titman Source : The Journal of Finance , Vol . 47 , No . 5 (Dec . , 1992) , pp . 1977-1984 Published by : Wiley for the American Finance Asso. *The Journal of Finance*, 47(5), 1977–1984.
- Gupta, O. K., Doshit, Y., & Chinubhai, A. (2008). Dynamics of productive efficiency of Indian banks. *International Journal of Operations Research*, 5(2), 78–90. www.iba.org.in
- Henriksson, R. D., & Merton, R. C. (1981). On Market Timing and Investment Performance . II . Statistical Procedures for Evaluating Forecasting Skills Author (s): Roy D . Henriksson and Robert C . Merton Source : The Journal of Business , Vol . 54 , No . 4 (Oct . , 1981) , pp . 513-533 Published. *The Journal of Business*, 54(4), 513–533.
- Jensen, M. C. (1968). THE PERFORMANCE OF MUTUAL FUNDS IN THE PERIOD 1945-1964. *The Journal of Finance*, 23(2), 389–416. <https://doi.org/10.1111/j.1540-6261.1968.tb00815.x>
- Klapper, L., Sulla, V., & Vitas, D. (2004). The development of mutual funds around the world. *Emerging Markets Review*, 5(1), 1–38. <https://doi.org/10.1016/j.ememar.2003.12.001>
- Kumar, R. (2016). *Conditional Models in Performance*. 4(1), 94–101.

- Prasad, R. S., & Srinivas, B. (2012). Market timing abilities of equity fund managers. *Zenith International Journal of Business Economics and Management Research*, 2(1), 161–170.
- Ramesh, B., & Dhume, P. S. (2014). Market timing ability of fund managers – Indian Experience. *The Indian Journal of Commerce*, 67(1), 1–15. <http://article.sapub.org/10.5923.j.ijfa.20160501.01.html>
- Rijwani, P. (2014). Stock Selection, Market Timing and Mutual Fund Performance. *Indian Journal of Accounting*, XLVI(2).
- Roy, S., & Ghosh, S. K. (2013). Can Mutual Fund Predict the Future? An Empirical Study. *Journal of Commerce and Accounting Research*, 2(1), 1–9.
- S, M., & Padmasani, D. (Mrs. . (2013). Testing the Treynor and Mazuy Model with Daily data in Indian Context. *Ssrn*, December 2012. <https://doi.org/10.2139/ssrn.2206199>
- Sehgal, S., & Babbar, S. (2017). Evaluating Alternative Performance Benchmarks for Indian Mutual Fund Industry. *Journal of Advances in Management Research*, 14(2), 222–250.
- Skrinjaric, T. (2013). Market Timing Ability of Mutual Funds With Tests Applied on Several Croatian Funds. *Croatian Operational Research Review*, 4(1), 176–186.
- Treynor, J., & Mazuy, K. (1966). Can mutual funds outguess the market? *Harvard Business Review*, 44(4), 131–136.
- Tripathy, N. (2017). Efficiency of mutual funds and performance measurement in India: An empirical investigation. *International Journal of Business Excellence*, 13(2), 217–237. <https://doi.org/10.1504/IJBEX.2017.086338>
- Tripathy, N. P. (2006). Market Timing Abilities and Mutual Fund Performance-An Empirical Investigation into Equity Linked Saving Schemes. *Viiakshan-XIMB Journal of Management*, 3(2), 127–138.
- Zabiulla. (2014). Portfolio strategies of fund managers in the Indian capital market. *IIMB Management Review*, 26(1), 28–58. <https://doi.org/10.1016/j.iimb.2013.12.003>