Mutual Funds Industry in India: An Empirical Study with Focus on Returns, Risk and Performance Measures

ABSTRACT

Fifty-six years since its inception, the Indian mutual fund industry today constitutes an important part of the Indian financial system. During the quarter 1 of the year 2020, the 44 assets management companies (AMCs) that comprise this industry reached assets under management (AUM) equal to nearly one-fifth of India's real gross domestic product (GDP). During this period, the equity schemes held over one-third of the total industry AUM, with inflows progressively growing since the global financial crisis (GFC) of 2008 and post-demonetization in November 2016. Being so, the growth and performance of equity mutual funds is of particular relevance for research in view of not only their strong growth in AUM but also their perceived potential to create long-term wealth for their investors.

The extent to which mutual funds succeed in their main function of savings mobilization will, *inter-alia*, depend on their financial performance in terms of rates of return, made available to investors, commensurate with their expectations. This, in turn, depends on several internal and external factors (under which mutual funds operate). The major external factors are broad market performance, macroeconomic environment, investor sentiments, the regulatory environment, liquidity conditions, global influencing events, etc. The internal factors primarily relate to selection of portfolio for investment and corporate governance.

Several facets of the performance of mutual funds have been researched (globally and in India) in relation to their returns, sources of risk, risk-adjusted returns, securities selection, portfolio management, benchmarks, performance attribution, external and internal factors of influence, regulation / governance, investor behaviour, active versus passive management, factor based models, fund manager style and process, sources of managerial outperformance, performance persistence, sensitivity of fund inflows, fund characteristics (age, size, type, ownership etc) and fund

flows etc. (notable studies include Barber *et al.*, 2015; Blitz, 2017; Nguyen *et al.*, 2018; Deb, 2018; Alhorani, 2019; Agrawal, 2020; Biswas, 2020; Chauhan, 2020).

The successive growth of fund inflows from a wide spectrum of investors ranging from foreign institutions to retail investors is a signal to the potential of Indian mutual funds in generating adequate and satisfactory returns for their heterogenous group of investors. In-depth studies are necessary to assess returns in justification of the growth in assets of mutual funds industry in India.

Thus, objectives of the study are: evaluation of aggregate performance on the basis of returns, risk and performance measures, Sharpe ratio, Treynor ratio and Jensen's Alpha; assessment of long-term performance disaggregated in relation to scheme characteristics; comparison of long-term performance in periods during and after the global financial crisis; and to gain insights, *inter-alia*, into the perceptions about returns, risk and performance of equity mutual funds from the perspective of practitioners, namely, the fund managers directly in-charge of assets under management.

The study assesses the long-term performance of equity mutual fund schemes in India during the period April 2000 to March 2018, using the sample of 350 equity mutual fund schemes. For the purpose of analysis, the 18-year long study period has been divided into 18 annual sub-periods that comprise two long-term phases, based on the GFC, namely, pre-crisis phase 1 (8 sub-periods within April 2000 – March 2008) and post-crisis phase 2 (10 sub-periods within April 2008 – March 2018). The total returns to scheme investors (inclusive of dividends paid by relevant schemes) form the base to compute total risk (using standard deviation); beta constitutes the basis of market risk, followed by well accepted risk-adjusted return measures of Sharpe ratio, Treynor ratio and Jensen's Alpha.

Aggregate performance of the sample schemes has been evaluated using mean, median and quartile values in relation to measures of performance and paired samples t-test has aided in establishing the significance of differences between the series. To present a comprehensive view

of performance beyond their standalone performance, the relative performance of the sample equity mutual fund schemes has been analysed with respect to market benchmark Nifty total return index (TRI) and risk free benchmark Government of India 10-year Bond yield.

The results from the analysis of returns reveal that Indian equity mutual fund schemes have, by and large, performed favourably on the objective of generating long-term returns for their investors. Returns of the sample equity schemes have been higher than average inflation as well as returns from risk-free asset benchmark over the entire study period. However, scheme returns have not outperformed the returns of market benchmark during the 18-year long study period as returns from market benchmark have been much higher during the 8-year long pre-crisis phase 1.

The sample equity schemes in lower standard deviation category have displayed better returns as well as risk-adjusted returns in comparison to schemes in higher standard deviation category. On aggregate basis, the overall results indicate that equity schemes do possess the ability to generate positive risk-adjusted returns commensurate to level of risk undertaken by them as demonstrated by positive values of Sharpe ratio, Treynor ratio and Jensen's Alpha for the study period.

The present study notes that higher total risk and market risk have been detrimental for their long-term performance. The schemes with poor performance (represented by the lower Alpha category) have been largely associated with higher standard deviation category and higher beta category. Juxtaposed to this, better performing schemes (symbolized by the higher Alpha category) frequently demonstrated both lower standard deviation category and lower beta category. But, at the same time, comparatively better performance of schemes, having low degrees of correlation with market benchmark, indicates the prevalence of unique risk factors that are unrelated to benchmark but are influencing returns regularly.

The performance has also been studied in relation to scheme characteristics – age (defined by years since launch) and size (defined by its AUM). Analysis of secondary data indicates that scheme size is of relevance while evaluating their performance in relation to their returns as well

as risk-adjusted returns. Performance of very large size schemes during phase 2 demonstrates statistical difference from other size groups; returns are higher than other size groups; and total risk lower than other size groups. Meanwhile, scheme age is of relevance in relation to Sharpe ratio and Jensen's Alpha only. Empirical results show that returns have declined as scheme age progresses. And, when compared to more aged groups, the middle age group is statistically different and has a superior ability to generate risk-adjusted returns.

The unexpected global financial crisis brought its own set of challenges for fund managers in the assets management industry worldwide. Notable studies have documented its significant influence on the risk management practices of the banking and financial services industry globally as well as in India. The survey of Indian fund managers provides the same conclusion and empirical results also corroborate the findings with an observed statistically significant decline in the total risk of the sample equity mutual fund schemes during post-crisis phase 2 from pre-crisis phase 1.