EVALUATION OF MUTUAL FUND PORTFOLIO USING FAMA-FRENCH AND MACHINE LEARNING MODELS IN INDIA

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A project report submitted

in partial fulfillment of the requirement for the award of the degree of

MASTER OF ARTS
IN
FINANCIAL ECONOMICS

May 2024

MADRAS SCHOOL OF ECONOMICS

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ABSTRACT

Mutual Funds have emerged to be a popular wealth creation source in recent times. With the emergence of so many mutual fund schemes it has become difficult to select the right fund for investment. The fund should not only earn excess returns or Jensen's alpha but also should be risk adjusted. The style and timing of investment is also important. This paper attempts to rank funds on the basis of risk ratios across the various size categories and check how the funds performed in the pre and post-covid periods using Fama-French and Machine Learning Random Forest Models. The timing ability of the funds is checked through the Treynor Mazuy Model. We find the funds with higher Sharpe ratio has significantly earned excess returns, particularly the small and mid-cap funds. Similarly, there is a higher evidence of timing ability in the small cap funds. The timing ability significantly improves when higher frequency data is used. Furthermore, we investigate into value weighted portfolio holding of funds of different size categories. We find that a value weighted combination of small, mid and large cap mutual fund categories outperforms the top flexi cap funds.