



Determinants of Mutual Funds Performance in Pakistan

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Abstract: Mutual funds offer a dependable choice for small investors lacking the necessary skills, experience, or capital to participate in the capital market. Finding the factors influencing mutual fund performance in Pakistan is the aim of this study. The research examined the performance of thirty-five mutual funds that were available in Pakistan between 2016 and 2020. Mutual Fund Association of Pakistan annual reports and mutual fund annual reports were the sources of the yearly performance statistics. For the data analysis in this study, a fixed effect - Random effect OLS was employed. According to the study, fund performance is positively impacted by variables including asset turnover and fund size. And the fund performance is being negatively impacted by load fees. Fund managers ought to keep all the aspects in balance in order to guarantee the investors' profit through the maximizing of its return.

Keywords: Mutual Fund, Fund size, Asset Turnover, Load Fee, Fund Performance, fixed effect- random effect.

1. Introduction

In every nation, mutual funds are essential to the capital market. Through mutual funds, families' and small investors' money are channeled and made accessible to the economy as investments in lucrative commercial ventures like stocks, bonds, and other financial instruments. The asset management firms that invest the money of both individual and institutional investors in various financial instruments are known as mutual funds. Small investors with limited knowledge, expertise, and risk tolerance can easily put their assets in lucrative portfolios through mutual funds, which are managed by more experienced fund managers. To produce a profit for investors, these astute and competent managers focus on lucrative and superior performing financial products. The enormous quantity of investors globally, and particularly in emerging nations, there is suggestion that investing is a viable option. Elton & Gruber (2020) claim that because to the industry's enormous worldwide and American reach, model selection has become essential. \$46.7 trillion in assets were being managed by 118,978 mutual funds globally as of the end of 2018. \$21.4 trillion was handled by the mutual fund sector in the US, with \$3.4 trillion going to exchange-traded funds (ETFs). More assets are managed in the US asset management sector than in any other nation or area. Over 43% of US families owned mutual funds, demonstrating the significance of these

investments to investors in the country. There are 2,114 bond funds and 3,200 equity funds available to US investors in long-term mutual funds.

During a moment of severe downturn in the banking industry, the Netherlands launched the first mutual fund in 1774. After being embraced in North America in 1924, mutual funds have developed into a crucial international investing tool since 1980. Mutual funds were initially introduced in Pakistan in 1962 by Investment Corporation. The industry has quickly expanded to include 170 different types of open-ended and, as of right now (ICP), closed-ended funds. Capital protection funds and money market funds, equity funds, and fund of funds, balanced funds, income funds, index tracker funds, and Islamic funds are just a few of the mutual funds that investors may currently trade in Pakistan. Since mutual funds are viewed by investors as a safer and lower risk investment alternative, the industry's amazing growth in Pakistan encourages people to make these kinds of investments. Pakistan has around 1.4% of the world's mutual fund assets.

Afza & Rauf (2009), Shah et al. (2012), Nazir & Nawaz (2010) and other writers have conducted several studies on mutual funds in Pakistan using traditional methods like Jensen alpha, Treynor ratio, and sharp ratio. The random and fixed effects this study makes use of OLS models, two more sophisticated methods for evaluating mutual fund performance. Since a wide range of factors, including dividends, management fees, NAV, equity, load fees, total assets, liquidity and asset turnover may impact a mutual fund's performance, this study inquiry takes all of these factors into account while focusing on Pakistan with the following goal in mind:

The following are the Objectives of this study:

- 1) To look into how fund size affects fund performance.
- 2) To look at how fund performance is impacted by asset turnover.
- 3) To look into how fund load fees affect fund performance.

2. Literature Review

Japee & Tripathi (2020) Investors may diversify their assets across many industries and secure a profitable return by taking advantage of the various investment options available in the Indian capital market. One kind of financial vehicle that assures investors of the lowest risks and maximum return is the open-end fund. It has been shown that one of the best ways to get substantial investment growth in the capital market is to expand and improve the variety of mutual fund products. In this case, closely monitoring and evaluating mutual funds became essential. Therefore, choosing profitable mutual funds to invest in may be essential. This study looks at the equity mutual funds that can be bought from different fund providers in India; with the right choices, investors will receive excellent support taking ratio into consideration. Investors will receive excellent guidance for their future investment decisions.

According to Cornell, Hsu, Kiefer, and Wool (2020), we anticipate professional fund managers to continuously have an advantage Chinese fund managers' success is noteworthy in a market where speculative retail trading is the norm. Through the use of data from the Chinese mutual fund sector, the authors develop a new talent metric to identify outstanding funds with continuous performance. A mutual fund that invests in stocks and finishes in the top 1% over a six-month period has a twenty-two percent probability of finishing in the top 10% the following year. On the other hand, for funds classified in the top 1% based on previous six-month performance, the chance of becoming a top 10% fund in the future half-year is just slightly greater than noise at 12%. A decline in performance persistence and competence throughout the industry is also noted by the authors, and it is most likely the consequence of mutual fund managers moving to hedge funds. This demonstrates that the majority of China's top-performing funds outperform their peers by taking advantage of market timing. Performance data is sometimes lacking from funds that regularly select profitable stocks. This can be connected to a mutual fund management culture that prioritizes market timing over other strategies for reducing downside risk than relative performance.

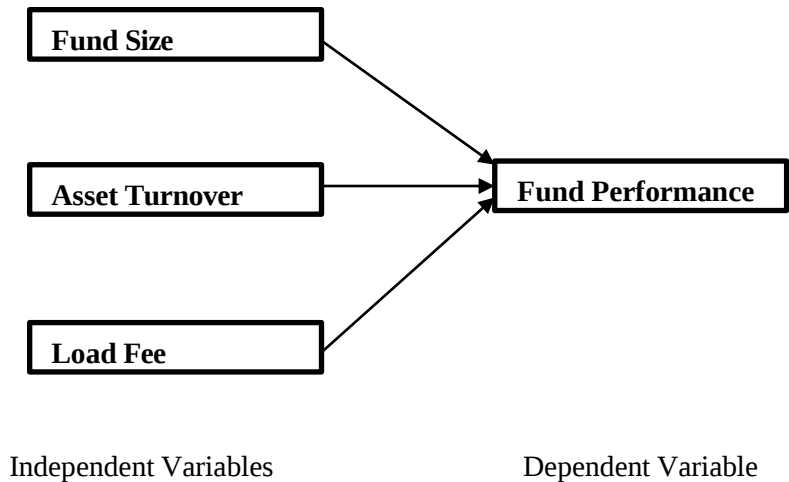
There is a lot to learn about mutual funds, and many scholars have contributed to the study of mutual fund performance. Tang Cheong (2007) and Zera et al. (2007) found that the size of the fund has a major impact on its expense ratio. As the size of the fund increases, the expenditure ratio falls due to economies of scale and decreased marginal costs. Consequently, most studies show a positive correlation between fund size and performance ((Petersson et al., 2001; Nazir & Nawaz, 2010; Gorman, 1991, Grinblatt Titman, 1994) However, a number of scholars have demonstrated a negative relationship between fund size and performance.

Turnover is one of the major factors affecting fund performance. Carhart (1997) found that turnover and fund performance were negatively correlated. The identical negative coefficient was established by Afza and Rauf (2010). On the other hand, several research found a favorable association between turnover and fund performance. Performance-fee funds have yearly net risk-adjusted returns that are 0.50% lower than other funds, according to Servaes & Sigurdsson (2022). This is mostly due to the fact that these funds have a benchmark that is easy to beat and do not have a stochastic benchmark to evaluate their performance against. Regarding the other funds, there is no evidence of underperformance. Performance fee funds have much higher overall costs, including the performance charge, than other types of funds, Investors in funds that impose performance fees are more inclined to penalize poor performance.

Compared to other kinds of money. Our results show that investors can generally be relied upon to make the right choices, even in situations where fees are not as strictly regulated. Nonetheless, a tiny portion of funds employ performance fees as a means of raising expenses for investors.

The following theoretical framework and set of hypotheses were conceptualized as a result of the key lessons discovered throughout the literature review:

2.1 Conceptual Framework



2.2 Hypothesis

- H₀: The performance of mutual funds is negatively impacted by fund size.
- H₁: The performance of mutual funds is positively impacted by fund size.
- H₀: The performance of mutual funds is negatively impacted by asset turnover.
- H₁: The performance of mutual funds is positively impacted by asset turnover.
- H₀: The performance of mutual funds is negatively impacted by load fees.
- H₁: The performance of mutual funds is positively impacted by load fees.

3. Research Methodology

The secondary data used in this quantitative study was gathered from a few The Pakistan Stock Exchange website, mutual fund annual reports, Mutual Funds Association of Pakistan website and the Business Recorder site. 35 mutual funds that are members of the Mutual Fund Association of Pakistan make up the research's population, and 44 open-ended mutual funds that have been in operation since 2016 make up the sample size. For the time frame of 2016–2020. 35 open-ended funds were chosen for this study using a random sample

approach. Random effect with fixed effect The research's data analysis on panel data (from 2016 to 2020) from the sample of 35 open-ended funds made use of the OLS model.

3.1 Measurement of Variables

This research study includes three independent variables, i.e., Fund size, Turnover and Load fee, while fund performance is dependent variable.
The following research model serves as the foundation for this investigation:
 $B0+B1 \text{ Fund size} + B2 \text{ Asset turnover} + B3\text{load Fee} + e = \text{Fund Performance}$
Fund Performance: The fund's annual sharp ratio is used to compute and quantify return, which is a representation of the fund's performance. The formula is $R=RP-RT/\Delta P$.
Fund size is the total amount of money that fund managers have invested in assets; it is computed as the natural log of the overall net asset value of the fund.
Turnover is computed by dividing total revenue by total assets in the fund.
Load Fee: To represent load as 0 and 1, a dummy variable has been constructed. Funds accepting load as 1 are treated as 0.

4. Data Analysis

4.1 Regression Analysis

4.1.1 Fixed Effect Model

Table 1: Fixed Effect Model

Return (sharp ratio)	Co-efficient	St. Error	T.Value	P.Value
Fund Size	0.336	0.107	2.21	0.032
Asset Turnover	0.312	0.069	2.32	0.032
Load Fee	0.216	0.073	-1.63	0.072

F.Value =16.39 R- square=0.67

With the exception of load fees and liquidity, the performance of mutual funds is positively impacted by all factors, according to the fixed effect given above. The findings imply that fund size significantly improves mutual fund performance. Asset turnover has been shown to have a favorable impact on fund performance, meaning that the more swiftly and efficiently the fund managers use their assets, the better their fund performance will be. Fund performance has been seen to be adversely affected by load fees. As a result, investors in mutual funds would prefer no load as it would reduce the return on their investments. The model's overall importance and fitness are demonstrated by the F-value of 16.39. The dependent variable (fund performance) in this study has changed 67% as a result of the independent factors, according to the R-square, which has a value of 0.67.

4.1.2 Random Effect

Table 2: Random Effect Model

Return (sharp ratio)	Co-efficient	St. error	T.Value	P.Value
Fund Size	0.242	0.119	3.82	0.031
Asset Turnover	0.122	0.033	2.61	0.091
Load Fee	-0.025	0.066	-2.70	0.728

Wald chi 6.015, R- square 0.48

Everything except load fee and liquidity has a favorable impact on mutual fund performance. The findings indicate, to be more precise: Fund Size significantly and favorably affects Mutual Fund performance. A favorable impact on fund performance is shown when asset turnover is taken into account, meaning that fund managers can improve fund performance by making faster use of their assets. A negative influence on the fund's performance has been identified with the load fee. A load charge collected by the fund management would have a detrimental effect on the performance of the fund. Investors in mutual funds would like no load since it will have a negative effect on their return.

The model's overall significance is shown by the F-value. The model appears to be significant based on the stated Wald-chi value. The R-square indicates that the collection of independent factors has caused changes in the dependent variable (fund performance) by around 36%.

Prob>Chi2= 0.035

Since there is a fixed effect in the data and the Hausman prob value is less than 5% (0.05), the fixed effect model can be used instead of the random effect model.

5. Conclusion

In the current investment world, mutual funds are the greatest option for small investors, particularly for those without access to capital market expertise, abilities, or information. The purpose of the study was to determine how various factors affected the performance of 35 Pakistani mutual funds. Both fixed and random effects were included in this study's data analysis. The research discovered that the various Mutual Fund determinants have a distinct effects on the mutual fund's performance. According to the study, investors are thought to have more faith and confidence in a fund as its size grows, which will undoubtedly improve the fund's performance. Thus, the findings demonstrated that fund size positively affects fund performance. Factors include the size of the fund and the asset turnover of various mutual funds showed a favorable correlation with fund performance. Furthermore, load fees have a detrimental effect on fund performance. Based on the results, fund managers are recommended to continue using a balanced approach when determining the factors that affect the fund's performance in order to maximize return, which will be advantageous to investors as well as mutual fund managers.

5.1 Recommendations

Including other factors like market circumstances, expense ratio, and fund manager experience. This would offer a more thorough comprehension of the variables impacting the mutual fund's performance. Furthermore, examining how the development of sustainable investment and technology improvements affect mutual fund performance may provide insightful information about how the market is changing. Your findings would be even more broadly applicable if you carried out a longitudinal research to track changes over time and included a wide group of funds from various asset classes and geographical areas. Last but not least, including qualitative data from investor and fund management interviews may offer a more nuanced viewpoint and comprehensive understanding of the variables influencing mutual fund performance.

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