

A REVIEW OF PERFORMANCE INDICATORS OF MUTUAL FUNDS

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ABSTRACT

Over the past few decades, mutual funds are playing a vital role in the economic development and this industry has flourished worldwide. In the light of these developments, the objective of this review is to identify the performance indicators of mutual funds and to analyse the impact of these performance indicators on mutual fund's performance. The study also draws attention to the contradictions in the literature in the area of examining these performance indicators which have been identified as per the available literature as performance persistence, turnover, expense ratio, asset size, load fee, investment style, mutual fund managers and the ownership style of the mutual funds. This paper elaborates the impact of these performance indicators. It has been found that each performance indicator affect the return of the mutual fund independently. This paper also discusses contradictions and the gap present in the literature regarding these performance indicators.

Keywords: Mutual Funds, Performance indicators, investment style, turnover, persistence, expense ratio, asset size, load fee, fund managers, ownership style.

INTRODUCTION:

Mutual fund is a trust that pools the money of the investors and invests it in the marketable securities. The capital appreciation, thus generated is distributed among the unit holders in proportion of the units held by them. Through mutual funds, investors get the benefit of diversification, professional management of their money, convenient administration, low cost and many more. Performance of the mutual fund is measured by the Net Asset Value, (NAV) of the fund. NAV of a fund is the total asset minus all expenses and divided by the number of units held by the fund. It has been found that the NAV is affected by various performance indicators of the fund like turnover, expense ratio, load status etc. Understanding the relationship between mutual fund performance indicators and its performance can help investors to make informed mutual fund investment decisions. Moreover, these will benefit to the mutual fund companies in taking investment decisions. Also, understanding the impact of performance indicators on the performance of mutual funds will be useful for mutual fund regulatory bodies in framing policies. These relationships have been widely studied by scholars and practitioners.

The objective of this study is to review the literature to identify the performance indicators of mutual funds and to draw attention to the contradictions in the literature in the area of examining these performance indicators. The study also analyses the impact of mutual fund's performance indicators on their performance. On the basis of past literature, the performance indicators of the mutual funds are performance persistence, turnover, expense ratio, asset size, load fee, investment style, mutual fund managers and the ownership style of the mutual funds.

PERFORMANCE INDICATORS:

According to Wermers (2000), Coval and Moskowitz (2001), Jan and Hung (2003), Papadamou and Stephanidesz (2004), the returns of the mutual funds can be predicted on the basis of their performance indicators as performance persistence, turnover, expense ratio, asset size, load fee, investment style, mutual fund manager and ownership of the mutual fund. In this section we have discussed all these performance indicators in detail.

PERFORMANCE PERSISTENCE:

'Performance Persistence means that the future performance of mutual fund can be predicted through their past performance' that is the past performance of the fund schemes is an indicator of their future performance. Persistence can be positive or negative. Positive persistence means if a mutual fund has performed well in the past, it will continue to outperform in the future. Similarly, negative persistence means that if a mutual fund has not performed well in the past then it will continue to underperform in the future as well. An earlier study done by Sharpe (1966) supported the persistence in the performance of the mutual funds. According to Carhart (1997), Chen, Jegadeesh and Wermers (2000) and Rao (2001), positive persistence is there in the mutual funds but only for a short term period i.e., one year or less. However, Elton, Gruber, and Blake (1996) and Drooms and Walker (2001) found the evidence of positive persistence up to three years but no evidence of the positive persistence was there beyond that period. On the contrary, Jan and Hung (2004) claimed that if mutual fund performance persists in the short run, it should also persist in the long run. The justification for their finding was if current year performance persists into the next year, and next year performance persists into the subsequent year, then the current year performance must influence subsequent- year performance. Their results confirmed that the investors can benefit by selecting mutual funds on the basis of both short- and long- run performance. Grinblatt and Titman (1992) also found the positive persistence in the mutual funds.

Grinblatt and Titman (1993) confirmed the existence of both negative and positive performance persistence in the mutual funds. According to their study, if a mutual fund has not performed well in the past then it will not give good returns in the future and if the fund has performed well in the past, it will continue to perform well in the future also. Carhart (1997) found the evidences of a negative persistence in mutual funds for long term. On the contrary, James and Douglas (1998) in their study on bond mutual funds found that there is no relationship between past performance and future returns as far as bond mutual funds are concerned and thus they did not support the existence of performance persistence in the mutual funds. In another study done by Jan and Hung (2003), the authors did not support the performance persistence in the mutual funds.

TURNOVER:

Centre for Research and Security Prices (CRSP) has defined the funds turnover as, minimum of aggregated

sales or aggregated purchases of securities, divided by the average 12-month total net assets of the fund. This ratio is expressed as a percentage of the fund.

Jan and Hung (2003) found that turnover affects the performance on the basis of investment objectives. There are several types of mutual funds on the basis of their investment objective. As growth mutual funds provide growth in the capital to the investors and invest their money mainly in equities. Balanced mutual fund's objective is to provide a regular income with capital appreciation to the investors and so in this case money is invested both in equities and debt. Income mutual funds provide a regular income to the investors and therefore invest their corpus mainly in the debt securities. According to them high- turnover funds performs better than low turnover funds for aggressive growth equity funds, long- term growth equity funds, global bond funds, high quality municipal bond funds, mortgage backed market funds, sector funds and special funds. On the other hands low turnover funds are performing better than their high turnover counterparts among international equity funds, high- yield money market funds and precious metal funds.

Dowen and Mann (2004) supported the conventional wisdom that high turnover reduces the overall performance of the mutual funds. They found the existence of the economies of scale in the cost structure of the mutual fund industry. According to them, the cost ratios for the individual funds decrease as the number of funds controlled by the asset manager increase. In contrast, Ippolito (1989) and Wermers (2000) show that high turnover mutual funds dominate low turnover mutual funds in terms of the performance. According to them, although high turnover funds incur substantially higher transaction costs and charge higher expenses, they hold stocks with much higher returns than low- turnover funds. Some studies such as Droms and Walker (1992, 1994 and 1996) suggested that the investment performance is not related to turnover rates for both domestic as well as international funds.

EXPENSE RATIO:

As described by the Centre for Research and Security Prices (CRSP), it is the ratio of the fund's operating expenses paid by shareholders to the total investment. These expenses include recordkeeping, custodial services, taxes, legal expenses, accounting and auditing fees and the marketing cost referred to as a 12b-1 fee. According to Securities and Exchange Commission, 12b-1 fee is an annual marketing or distribution fee on a mutual fund. It is considered as an operational expense and as such is included in a fund's expense ratio. The maximum limit for this fee is 1 percent of a fund's net assets.

Droms and Walker (1994) and Grinblatt and Titman (1989) found that there is no relationship between expense ratio and mutual fund performance. According to their study, for mutual funds, expense ratio being high or low does not have any impact on their return. However, in an earlier study, Ippolito (1989) confirmed a positive relationship between mutual fund expenses and performance. That is higher expense ratio results to good performance and low expense ratio leads to lower performance in the mutual funds. Malhotra and Mcleod (1994) argued in favour of high expense ratio for the better performance of the mutual funds. They supported the Rule 12b- 1 expense of the mutual fund. According to this study, Rule 12b- 1 expense includes additional growth and provides benefit to shareholders from economies of scale. In some other studies done by Droms and Walker (1995, 1996), it was found that the higher expense ratio results in higher returns. The logic given by the authors for their findings was that, the higher expenses are consistent with the higher risk within the portfolio and hence may result into higher returns.

On the contrary, Philpot et al. (1998) found that mutual funds with higher expense ratios give lower returns. According to their study, mutual fund managers are not able to increase the returns of their portfolio by spending resources on active management i.e., analysis and trading activity, prediction of market efficiency etc. In another study, Jan and Hung (2003) applied stochastic dominance approach for analysing the impact of expense ratio of the mutual funds on their performance. They divide the investors into two categories. First type of investors who have no preference with respect to the risk and second, the investors who are risk averse. For the first category of investors, they applied first degree stochastic dominance (FSD) and for the second category, second degree stochastic (SSD) was used. They found that, in both the cases low expense mutual funds are giving better returns than the high expense mutual funds.

ASSET SIZE:

Asset size of a mutual fund is the total market value of all the securities held in its portfolio. Association of Mutual Funds of India has described it by the Asset under Management of the mutual fund.

Chen et al (1992) found that larger funds performed better than small funds. According to them, large fund managers possess better stock selection capability and hence lead to better performance of the fund. Philpot et al. (1998) and Downen and Mann (2004) found that over time mutual funds exhibit economies of scale. This leads to better returns for larger funds. However Indro et al. (1999) suggested that a relationship between fund size and performance exists in a linear sense. When funds first start out, their growth provides cost advantages because growth increases net returns. In addition most cost and expenses do not rise in direct proportion to the fund size. They have found that when a fund reaches optimum size, marginal returns begin to decline or become negative. Jan and Hung (2003) through stochastic dominance approach found that large funds are giving better results than small funds.

Other studies as Droms and Walker (1994) and Grinblatt and Titman (1993) found the absence of any relationship between fund size and performance. Droms and Walker (2001) and Sing (2007) analysed the potential long run economies of scale to determine whether or not there is a significant relationship between asset size and this operating characteristics i.e., economies of scale. Their results contrast those studies above and found that mutual fund returns are not related to fund size over the period studied. This puts the economies of scale theory to test where it is argued that larger funds would be able to offer lower expenses and better returns simply through economies of scale. In a later study, Droms and Walker (1995) studied the mutual fund attributes with regard to the riskiness of the fund and suggested that smaller funds are more risky funds and hence may lead to better returns as against their earlier study in the year 1994.

LOAD FEE:

Load fee is fee paid by the unit holder either at the time of buying the unit or at the time of selling the units. The charge collected by the scheme when it sells the units to investors is called 'entry load' or 'front- end load'. The charge collected by the scheme when it buys back the units from the unit holders is called 'exit load' or 'back- end load'. Schemes that do not charge a load are called 'No Load' schemes.

There is a contradiction in the literature regarding the effect of load status of the fund. Some studies as Droms and Walker (1994 and 1996) have shown that there is no reward for paying load fee and the returns on mutual funds are not affected by the load fee. Further in a study, Droms and Walker (1995) found that load or no-load status of a fund is not related to the riskiness of the fund. Hence, there is no impact of the load status on the returns of the mutual funds. In contradiction to this some studies have shown that the mutual fund performance is affected by its load status. Philpot et al. (1998) found that mutual funds charging a load fee are underperforming than the no load funds. While Jan and Hung (2003) found that load funds are giving better results than the no- load funds. However, they argued that these findings are true when we restrict ourselves to a specific mutual fund category as the results may vary according to the investment objectives of the mutual funds.

INVESTMENT STYLE:

Association of Mutual Funds in India has described the types of mutual funds schemes on the basis of its investment objectives as Growth Schemes, Income Schemes, Balanced Schemes and Money Market Schemes. The objective of the growth schemes is to provide capital appreciation and hence they invest their corpus mainly in equities. Income scheme's objective is to provide steady income to the investors. Therefore the corpus of the income schemes is mainly invested into debt securities. Balanced schemes are to provide capital appreciation with the regular income to the investors. So they invest the capital into equity as well as debt securities.

Several studies have been done regarding the performance of the mutual funds with respect to its investment style. In an earlier study, Donald (1974) found that the mutual fund's performance is affected by its investment objective and funds with more aggressive objectives produced better performance. Papadamou and Stephanidesz (2004) and Rao (2006) also found that the performance of the mutual funds varies with its investment style. According to their study, out of growth and dividend plans, growth plans are giving better returns and have low risk per return. Contrary to this, Shi and Seiler (2002) found that investment style is not sufficient to judge the performance of the mutual funds and it does not have considerable impact on its returns. Elton et. al. (2007) also found that investment style does have an impact on the returns and investors should build a portfolio of the funds from different families.

MUTUAL FUND MANAGERS:

Mutual fund manager is a person who is responsible for implementing the fund's investing strategy and

managing its portfolio trading activities. A fund can be managed by one person or by a management team with two or more than two persons. Fund managers are paid a fee for their work, which is a percentage of the fund's average assets under management.

Fama (1972) broke a mutual fund manager's forecasting skills into two components: micro forecasting and macro forecasting. In micro forecasting, the manager forecasts the price movements of the individual stocks and in macro forecasting, the mutual fund managers forecasts the price movements of the entire stock market. The former is known as security analysis while the latter is known as market timing. In an early study, Jensen (1968) found that fund managers are not able to time the market well. Lee and Rahman (1990) found that mutual fund managers are able to do good micro and macro forecasting for the fund. Another characteristic of mutual fund manager involves his stock picking ability. Grinblatt and Titman (1989, 1993) and Wermers (1997) found that managers who actively trade do possess significant stock picking abilities. According to this study, fund managers have the ability to outperform the market before expenses were deducted. However, later Wermers (2000) contradicted his previous study by finding that actively managed funds on average, underperform their passively managed counterparts. This study showed that the fund managers are not able to beat the market through better stock picking ability.

Several studies have been done regarding the impact of mutual fund manager's tenure on its performance. Mishelson and Wagner (1999) examined the mutual fund manager tenure and mutual fund performance using a difference of means t- test and found no evidence of any relationship between mutual fund manager tenure and its performance. According to this study, selecting a mutual fund based on manager tenure is not a good investment. As fund manager's tenure does not have any impact on its performance. In another study Costa et al. (2006) concluded that manager tenure is not a significant factor when looking for superior mutual fund investment returns. Costa and Porter (2003) found that managers with lengthy experience at funds were unable to provide greater risk adjusted returns than less experienced managers. Carhart (1997) observed that there is little evidence of skilled or informed mutual fund managers in the area of persistence of the performance.

OWNERSHIP OF MUTUAL FUND:

Ownership of the fund has been divided as local i.e., domestic and non-local i.e., foreign funds. When the sponsors of the mutual funds are from the same country where it is registered then it is local mutual fund. If the sponsors of the mutual fund belongs to a country other than in which it is registered, then it is known as non-local or foreign mutual fund. There has been a preference of domestic investments over foreign investments. Lewis (1999) has done a comprehensive survey on 'home bias' puzzle. Investors are biased in choosing between local and Non- local funds. They consider that the non- local will underperform than the local funds because of transaction costs, institutional constraints, currency risk, and informational disadvantages as compared to the local funds.

According to the studies done by Brennan & Cao (1997), Coval and Moskowitz (2001) and Hau (2001) as local investors have superior access to information on local firms they outperform foreign investors. These results relate to foreign individual investors lacking local information. A solution to this problem could be the mutual funds that invest in the foreign market. Mutual fund managers are expected to have better knowledge about the market in which they are investing than individual investors. Fletcher (1997) investigates the performance of UK mutual funds investing in US equity. Using 85 funds over the 1985-1996 period he found that UK funds investing in the USA gave lesser return as compared to their benchmark portfolio. This is in line with the findings of Carhart (1997) and Gruber (1996) that the local US mutual funds are performing better than their non- local counterparts.

Shukla and Inwegen (1995) did a direct comparison of the local versus foreign mutual funds. They studied the performance differential of 108 US mutual fund managers investing in the USA, versus 18 UK managers also investing in the USA over the 1981- 93 periods. Controlling for the factors like tax treatment, fund expenses, fund objectives and currency risk they conclude that UK mutual funds investing in USA significantly underperform US funds. The explanation for this conclusion was the information disadvantages foreign fund managers face when competing against local fund managers.

Recently in a number of studies, the differences in the performance of locals and foreigners have been contributed to the type of securities held by them. Covrig et al. (2001), Dalhquist and Robertsson (2001) Kang and Stultz (1997) and Kim (2000) found that the foreign investors hold relatively larger stocks compared to local investors. Grinblatt and Keloharju (2000) found that foreigners tend to be momentum investors while locals are contrarians. Otten and Bams (2007) argued that the general conclusion in the previous literature is

that the local investors outperform the foreign investors because they have the superior access to information on local firms. Further they conclude that, this holds mostly for the smaller companies or individual investors. They examined the UK equity mutual funds investing in the USA versus US equity mutual funds. After controlling the tax treatment, fund objectives, management fees, investment style and time variation in betas, authors did not find a significant difference in risk- adjusted returns between US and UK funds.

CONCLUSION:

Performance of any mutual fund is measured by its NAV. There are different factors that affect NAV of any mutual fund scheme. These factors are also known as performance indicators. Past performance of mutual funds explains how the fund has performed in the past and accordingly one can expect positive or negative performance in the future as well. Majority of studies suggest that the mutual fund companies having high turnover have performed well than companies with lower turnover. Expense ratio affects the performance of mutual funds positively. Mutual fund companies with larger asset base are performing better than lower asset based companies. Out of the total paper reviewed no clear relationship of load fee with performance was found. Literature suggests that the investment style does have an impact on the performance of the mutual funds. Mutual fund managers also do affect the performance of the mutual funds in many ways. Literature support that the stock picking ability and Lengthy tenure of fund managers are favourable for mutual funds' performance. As per the literature available, performance of the mutual fund is also related to its ownership style. Local mutual funds perform better than the foreign mutual funds as they have better knowledge of the local market. These finding have been summarized in the table 1 below.

Table 1: Summary of some prominent studies on mutual fund performance indicators

| Performance Indicator | Authors | Relationship With Performance |
|---|---|---|
| Past Performance (Performance Persistence) | Sharpe (1966) | Performance Persistence exists. |
| | Carhart (1997), Chen; Jegadeesh & Wermers (2000) & Rao (2001) | Positive Persistence for up to one year. |
| | Elton, Gruber, & Blake (1996); Drooms & Walker (2001) | Positive Persistence for up to three years. |
| | Jan & Hung (2004) | Persistence for long term |
| | Grinblatt & Titman (1992) | Positive & negative Persistence |
| | Grinblatt & Titman (1993) | Positive & negative Persistence |
| | Carhart (1997) | Negative Persistence for long run |
| | Douglas (1998); Hung (2003) | No evidence |
| Turnover | Jan & Hung (2003) | Affects as per investment style |
| | Dowen & Mann (2004) | Negative Relationship |
| | Ippolito (1989); Wermers (2000) | Positive Relationship |
| | Drooms & Walker (1992, 1994 & 1996) | No Relationship |
| Expense Ratio | Ippolito (1989); Malhotra & Mcleod (1994); Drooms & Walker (1995, 1996) | Positive Relationship |
| | Philpot et al. (1998); Jan & Hung (2003) | Negative Relationship |
| | Drooms & Walker (1994); Grinblatt & Titman (1989) | No Relationship |
| Asset Size | Chen et al (1992); Jan & Hung (2003); Indro et al. (1999); Philpot et al. (1998); Dowen & Mann (2004) | Positive Relationship |
| | Drooms & Walker (1995) | Negative Relationship |
| | Drooms & Walker (1994); Grinblatt & Titman (1993); Drooms & Walker (2001); Sing (2007) | No Relationship |
| Load Fee | Jan & Hung (2003) | Positive Relationship |
| | Philpot et al. (1998) | Negative Relationship |
| | Drooms & Walker (1995); Drooms & Walker (1994 & 1996) | No Relationship |
| Investment Style | Donald (1974); Papadamou & Stephanidesz (2004); Rao (2006) | Yes |
| | Shi & Seiler (2002); Elton et. al. (2007) | No Relationship |
| Mutual Fund Managers | Fama (1972) | Broke managers work -Security analysis & market timing. |

| | | |
|--------------------------|---|-------------------------------------|
| Ownership of Mutual Fund | Lee & Rahman (1990) ¹ | Positive Relationship. |
| | Grinblatt & Titman (1989, 1993); Wermers (1997) | Positive Relationship. ² |
| | Jensen (1968) ³ ; Wermers (2000) | Negative Relationship |
| | Brennan & Cao (1997); Lewis (1999); Coval & Moskowitz (2001); Hau (2001) | Yes ⁴ |
| | Fletcher (1997); Carhart (1997) & Gruber (1996) | Yes ⁵ |
| | Shukla & Inwegen (1995); Otten & Bams (2007) | Yes ⁶ |
| | Covrig et al. (2001); Dahlquist & Robertsson (2001); Kang & Stultz (1997); Kim (2000) | Yes ⁷ |
| | Grinblatt & Keloharju (2000) | Yes ⁸ |

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¹ Managers do macro and micro forecasting well.

² Possess significant stock picking ability

³ Do not time the market well

⁴ non- local underperform than the local funds because of transaction costs, institutional constraints, currency risk, and informational disadvantages as compared to the local funds

⁵ local US mutual funds have performed better than their non- local counterparts.

⁶ Local funds performed better because information advantage to non local mutual funds.

⁷ foreign investors hold relatively larger stocks compared to local investors.

⁸ foreigners tend to be momentum investors while locals are contrarians.

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