Performance Evaluation of Selected Mutual Fund Schemes

Chandrashekhar. R

Department of Business Administration, Mangalore University

Abstract

This study aims to evaluate the mutual fund schemes in Indian market. Two-sample z test is used to test the difference between the normal scheme return and the expected return of selected mutual fund schemes. The test result reveals that 75 percent of the schemes outperformed the market and the difference between actual return and expected return is insignificant over the period. This difference is same for the remaining undeforming schemes. This result indicates that mutual fund investments is better for risk averse investors, since it provides better return than market.

Key Words: Mutual Funds, Expected Return, NAV, AMCs

1. Introduction:

Investors in the market looks into investment needs before investing in any investment avenues. Investment goals vary from person to person with reference to risk and return. Investment is an ongoing process, wherein investors need to continuously monitor the performance of the investments. Continuously monitoring of investment will ensure the updated information about the portfolio. It also gives the investor an opportunity to make necessary alterations to their portfolio, when some investments have failed to meet the investment objectives. All the capital market instruments have varying degrees of risk, the degree of risk being the highest in equities and the risk factor is highlighted in the respective offer documents as well as in the abridged offer documents. The investor therefore is in the full knowledge and understanding of the risks involved in various schemes. Investors opt for mutual funds for the reason that all benefits come in an investment avenue. Risk averse investors normally find their way into the debt market as risk reduction is of prime objective. Mutual fund market is the area for the risk-averse investors and it is generally the best option. The mutual fund industry is a fast growing segment of the Indian Financial Market and it provides a variety of schemes to suit the needs and risk return profile of different categories of investors who are kept completely informed regularly through periodical reports and statutory disclosures. Mutual funds play a dynamic role in mobilizing savings by issuing units and channeling the funds in the capital market into productive investment.

2. Objectives and Hypothesis of the Study

This study intends to examine the relative movement of the NAVs of the different schemes with Benchmark BSE 200 prices. The hypothesis, here is significance difference between the normal scheme return and the expected scheme return is tested.

3. Sample and Sources of Data

142 mutual fund schemes were examined to find the superior performance. NAV of selected schemes were collected from the website of Association of Mutual Funds in India and concerned AMC website. Closing price of BSE 200 were collected from Prowess, the corporate database of Centre for Monitoring Indian Economy (CMIE). This study uses theoretical information and research articles gathered from various published books, articles and websites.

4. Methodology of the study

Actual return of the mutual funds was compared with expected return to examine the relative movement of NVAs with market. The expected return represents the return that would be expected if no event took place. The expected return of a mutual fund for a day is calculated with the following market model:

$$E(R_{jt}) = \alpha_j + \beta_j R_{mt}$$

Where R_{mt} is the return on the market index for day 't' in the for the study period. Since the market model takes explicit account of both the risk associated with the market and mean return, it is used to estimate the expected return. Further, two sample z test is used to examine and compare the expected and actual return at 5 percent level of significance.

5. Literature review

Risk averse investor in the market choose mutual funds to address issues like stock selection and market timing, since fund managers take care of these issues to earn superior return. Therefore, prior researchers examined fund performance throughout the global market.

Stanley (1983) measured market-timing performance of investment managers and indicate that at the individual fund level there is evidence of significant superior timing ability and performance. His multivariate tests were consistent with the efficient markets hypothesis and fund managers as a group have no special information. The empirical results of **Henriksson (1984)** do not support the hypothesis that mutual fund managers are able to follow an investment strategy that successfully use the market timing to earn return. **Chang and Wilbur (1985)** provide evidence that more than one factor was present in the market during that interval as a systematic influence on the profile of securities returns. Their evidence also suggests that mutual fund portfolios did not outperform a passive buy-and-hold investment strategy. Their comparative analysis using performance measures indicates similar but less powerful results and both taken together and at the individual fund level. Empirical results of **Lee and Shafiqur (1990)** indicate that at the individual fund level there is some evidence of superior micro- and macro forecasting ability on the part of the fund manager. **Grinbltt and Sheridan (1993)** introduce a new measure of portfolio performance and applies it to study the performance of large sample mutual funds. They find that the portfolio choices of mutual fund managers, particularly those that managed aggressive growth funds, earned significantly positive risk-adjusted returns in the

1976-85 period. **Brown and William (1995)** explore the performance persistence in mutual funds schemes using absolute and relative benchmarks. They indicates that relative risk-adjusted performance of mutual funds persists with a sample largely free of survivorship bias. They also indicate that poor performance increases the probability of disappearance. They also state that deterioration of the persistence effect demonstrates, relative performance pattern depends upon the time period observed. Their analysis of the risk and return characteristics of chasing the winners suggests a positive alpha strategy and has a high level of total risk. They also observe that total risk is not diversifiable Because of the correlation across winning funds, and thus it matters to risk-averse investors. Further, they state that the correlation of winning strategies suggests the possibility that winning funds are loading up on a macroeconomic factor, unassociated with the major components of equity returns that may be priced. **Brown et al (1996)** investigate the performance of growth-oriented mutual funds and demonstrates that mid-year losers tend to increase fund volatility in the latter part of an annual assessment period to a greater extent than mid-year winners. Further, they show that this effect became stronger as industry growth and investor awareness of fund performance increased over time. **Gruber (1996)** questions why mutual funds and in particular actively managed mutual funds have grown so fast, when their performance on average has been inferior to that of index funds. According to Gruber (1996) one possible explanation, why investors buy actively managed open-end funds lies in the fact that they are bought and sold at NAV, and with unpriced management ability. He also opines that when management ability is not included in the price of open-end funds, then performance should be predictable. He also states that at least some investors are aware of performance prediction, then cash flows into and out of funds should be predictable by the very same metrics that predict performance. He conclude that some investors act on these predictors in investing in mutual funds that with the existence of predictors and the return on new cash flows should be better than the average return for all investors in these funds. He provides empirical evidence on all of these issues and shows that investors in actively managed mutual funds may have been more rational than we have assumed.

Carhart (1997) shows that common factors in stock returns and investment expenses almost completely explain persistence in equity mutual funds' mean and risk-adjusted returns. He also states that significant persistence not explained is concentrated in strong underperformance of worst-return mutual funds. His results do not support the existence of skilled or informed mutual fund portfolio managers. He also finds that expense ratios, portfolio turnover, and load fees are significantly and negatively related to performance. He also shows that load funds substantially underperform no-load funds. The results of his study suggests three important rules-of-thumb for wealth-maximization through mutual fund investors. He suggests to avoid funds with persistently poor performance, funds with high returns last year have higher-than-average expected returns next year and thirdly, investment costs of expense ratios, transaction costs, and load fees all have a direct, negative impact on performance. **Kao et al (1998)** examines the selectivity and market-timing ability and suggest that fund managers of international mutual funds possess good selectivity and overall performance. They also find weak evidence of poor market-timing ability. They state that this result is consistent with prior findings from domestic mutual funds and there is a negative correlation between the international fund managers' selection ability and market-timing ability. Their finding reveals that managers for Europea funds show poorer performance than those managing the other three international fund groups.

Ippolito (1998) opines that when information is costly to collect and implement, then it is efficient for trades by informed investors to occur at prices sufficiently different from full-information prices to compensate them for the cost of becoming informed. They tested this notion by evaluating investment performance of mutual funds over a 20-year period. He finds evidence that is consistent with optimal trading in efficient markets. He also states that risk-adjusted returns in the mutual fund industry, net of fees and expenses, are comparable to returns

available in index funds; and portfolio turnover and management fees are unrelated to fund performance. **Narasimhanet al (2000)** investigate the value of active mutual fund management through stockholdings and trades of mutual funds. They find that stocks widely held by funds do not outperform other stocks. They state that stocks purchased by funds have significantly higher returns than stocks they sell and this is true for large stocks as well as small stocks, and for value stocks as well as growth stocks. They find that growth-oriented funds exhibit better stock-selection skills than income-oriented funds. They find weak evidence that funds with the best past performance have better stock-picking skills than funds with the worst past performance. **Jain and Joanna (2000**) examine a sample of mutual funds that are advertised and record that the pre-advertisement performance of these funds is significantly higher than that of the benchmarks. They also test whether the sponsors selected funds to indicate superior performance continuously or they use the past superior performance to attract investors to the funds. Their analysis shows that there is no superior performance in the post advertisement period. Therefore, they state that the results do not support the signaling hypothesis and find that the advertised funds attract significantly more money compare to a group of control funds.

Elton et al (2002) show that the other important aspects of performance, risk and tax efficiency, are also easily predictable. They state that the relationship between new cash flows and performance is much weaker than expect based on rational behavior. They also state that marketing and spillover account for some difference and only a small amount, of the cash flows not accounted for performance. They also show that selecting funds based on low expenses or high past returns leads to a portfolio that outperforms the portfolio of index funds selected by investors. Their results indicate that, in a market where arbitrage is not possible, dominated products can prosper. **Elton et al (2003)** examines the effect of incentive fees on the behavior of mutual fund managers. They show that funds with incentive fees exhibit positive stock selection ability, but a beta less than one results in funds not earning positive fees. They state that positive alphas plus lower expense ratios make incentive-fee funds attractive from the point of investor's perspective. They also state that incentive-fee funds take on more risk than non-incentive-fee funds, and they increase risk after a period of poor performance. They find that incentive-fee funds take more risk than non-incentive-fee funds on average, and that they increase risk after a period of poor performance and decrease it after a period of good performance. Further they state that the sophisticated investor is better off buying funds with incentive fees than buying funds with no incentive fees. They also observe that risk-adjusted return is higher because of better management performance and lower expenses. **Elton et al (2004)** show that selecting funds based on low expenses or high past returns outperforms the portfolio of index funds selected by investors. Their results demonstrate that, in a market where arbitrage is not possible, dominated products can prosper. **Chen et al (2004)** find strong evidence that fund size erodes fund performance. They find that this relationship is not driven by heterogeneity in fund styles, fund size being correlated with other observable fund characteristics, or any type of survivorship bias. They suggests that liquidity is an important reason why size erodes performance. They find that organizational diseconomies affect the relationship between fund size and performance.

Kenourgios and Petropoulos (2005) investigates the mutual funds that have presented the highest return for one or two years continue the same high performances in long run. They test persistence of return by constructing two-way tables, which shows successful performance over successive two-year and one year period. They conclude that in 1990s persistence return is weak and do not find strong evidence that past returns provide information regarding future returns. **Avramov and Russ (2006)** find predictability in manager skills to be the dominant source of investment profitability in long term strategies that incorporate such predictability outperform their Fama-French and momentum benchmarks by 2 to 4 percent per annum by timing industries over the business cycle, and by an additional 3 to 6 percent per annum by choosing funds that outperform their industry benchmarks. They also indicate that active management adds significant value, and that industries are important in locating outperforming

mutual funds. **Edelen et al (2007)** examines the role of trading costs as a source of diseconomies of scale for mutual funds. They estimate annual trading costs for a large sample of equity funds and find that they are comparable in magnitude to the expense ratio; that they have higher cross-sectional variation, which is related to fund trade size; and that they have an increasingly detrimental impact on performance as the fund's relative trade size increases. They also state that relative trade size subsumes fund size in regressions of fund returns, which suggests that trading costs are the primary source of diseconomies of scale for funds. **Deb et al (2007)** attempts to find the stock selection and market timing abilities of the Indian fund managers and observed lack of market timing ability and presence of stock selection ability in both unconditional as well as conditional approaches. Their pooled regression also indicates lack of market timing abilities and presence of stock selection abilities.

6. Performance of Mutual Funds

The test results of the selected mutual fund schemes are presented in the following table.

Table Showing Fund Performance

	Significant	Insignificant	Total
No of Funds outperformed the market	2	106	108
No of Funds underperformed the market.	2	33	35

The biggest changes of an ordinary investor being stock selection and market timing, fund managers take care of these issues to earn superior return. It is assumed that fund managers are expert in this area, hence they handle it properly. The results of the study reveals that 108 schemes outperformed the market. However, the difference is insignificant expect for two schemes during the study period. Remaining 35 schemes underperform and it is insignificant except for two schemes. The insignificant difference between actual return and expected return indicates that NAV movements are in line with market. Further, this result indicates that no funds outperformed the market except a few.

7. Conclusion:

Mutual funds represent one of the fastest growing type of investment avenues across financial markets. Since, it is managed by the expert fund manager's, investors in the market except superior return and try to avoid high-risk avenues. This study examines the movement of mutual fund NAV with the market using two-sample z test. The results of the hypothesis test indicates that no schemes outperformed the market except a few. However, most of the schemes earn positive return with insignificant difference with expected return. This result indicates that the NAVs of different schemes moves along with the market. Further, it indicates that AMCs manages funds on per with market. The results of this study is consistent with many of the prior studies. Therefore, by care full selection of mutual fund scheme investor in the market can manage their portfolio with positive return.

Reference

1. Avramov, D. and Russ, W. (2006), Investing in mutual funds when returns are predictable, Journal of Financial Economics 81 (2006), pp. 339–377
2. Brown, K., Harlow, W. V., and Starks, L. (1996). Of Tournaments and Temptations: An Analysis of Managerial Incentives in the Mutual Fund Industry. The Journal of Finance, 51, No. 1, pp 85-110.
3. Brown, S. J. and William, N. G. (1995), Performance Persistence, The Journal of Finance, Vol. 50, No. 2, pp. 679-698
4. Carhart, M. M. (1997), On Persistence in Mutual Fund Performance, The Journal of Finance, Vol. 52, NO.1., pp 57-82.
5. Chang, E. C. and Wilbur, G. L. (1985), AN ARBITRAGE PRICING APPROACH TO EVALUATING MUTUAL FUND PERFORMANCE, The Journal of Financial Research, Vol. 8, No.1, pp. 15-30.
6. Chen, j., Harrison, H., Ming, H. and Jeffrey, D. K. (2004), Does Fund Size Erode Mutual Fund Performance? The Role of Liquidity and Organization, The American Economic Review, Vol. 94, No. 5, pp. 1276-1302.
7. Edelen, R. M., Evans, R. B. and Kadlec, G. B (2007), Scale Effects in Mutual Fund Performance: The Role of Trading Costs (March 17, 2007), http://dx.doi.org/10.2139/ssrn.951367
8. Elton, E. J., Martin, J. G. and Christopher, R. B. (2003), Incentive Fees and Mutual Funds, The Journal of Finance, Vol. 58, No. 2, pp. 779-804
9. Elton, Edwin J. and Busse, Jeffrey A. and Gruber, Martin. J. (2002), Are Investors Rational? Choices Among Index Funds (June 2002). NYU Working Paper, http://dx.doi.org/10.2139/ssrn. 340482
10. Kao, W., Louis T. W. C. and Kam C. C. (1998) ,International mutual fund selectivity and market timing during up and down market conditions, The Financial Review, Vol. 33, Pp. 127-144.
11. Kenourgios, D. and Petropoulos, I. (2005), The Persistence of Mutual Funds Performance: Evidence from the U.K. Stock Market. EKONOMIA, Cyprus Economic Society and University of Cyprus, Vol. 7, No. 2, pp. 121-138.
12. Lee, C. and Shafiqur, R. (1990), Market Timing, Selectivity, and Mutual Fund Performance: An Empirical Investigation, The Journal of Business, Vol. 63, No. 2 pp. 261-278.
13. Narasimhan, J., Chen, H. and Wermers, R. R., (2000), The Value of Active Mutual Fund Management: An Examination of the Stockholdings and Trades of Fund Managers. Journal of Financial and Quantitative Analysis, 35 (2000), pp. 343-368.
14. Roy D. Henriksson (1984), Market Timing and Mutual Fund Performance: An Empirical Investigation, The Journal of Business, Vol. 57, No. 1, Part 1 (Jan., 1984), pp. 73-96.
15. Deb, S. G., Ashok, B. and Chakrabarti, B. B. (2007), Market Timing and Stock Selection Ability of Mutual Funds in India: An Empirical Investigation, Vikalpa: The Journal for Decision Makers, Vol. 32, N. 2, Pp.39-51.
16. Stanley J. Kon (1983), The Market-Timing Performance of Mutual Fund Managers, The Journal of Business, Vol. 56, No. 3 (Jul., 1983), pp. 323-347.
17. Elton, J. E., Gruber, M, J. and Busse, J. A. (2004), Are investors rational? Choices Among Index Funds, The Journal of Finance, Vol. 59 , No. 1, (2004), pp. 261-288
18. Ippolito, R A. (1998), Efficiency with Costly Information: A Study of Mutual Fund Performance, 1965–1984, The Quarterly Journal of Economics, Vol.104, No. 1, Pp. 1–23, https://doi.org/10.2307/2937832

19. Gruber, M J. (1996), Another puzzle: The growth in actively managed mutual funds, The Journal of Finance, Vol. 51, No. 3, (1996), pp. 783-810.
20. Jain, P. C and Joanna, S. W. (2000), Truth in Mutual Fund Advertising: Evidence on Future Performance and Fund Flows, The Journal of Finance, Vol. LV, No. 2, pp 937-958.
21. Grinblatt, M. and Sheridan, T. (1993), Performance Measurement without Benchmarks: An Examination of Mutual Fund Returns, The Journal of Business, Vol. 66, No. 1, pp. 47-68

*****