A Review of Mutual Investment Funds Performance with a View of Market Timing

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ABSTRACT

Appropriate function of active management in common investment funds function depend on factors such as diversification, identification papers unrealistic pricing, market timing, and so on. Market timing are include changing the portfolio investment funds and market indices such as short-term bonds and make an asset depends on whether the market is expected in the whole of the assets to make better or worse. In this study, with using Henriksson and Merton (2008) methodology to assess the market timing function of investment funds in Iran. Based on the above methodology, beta of the portfolio takes only two values. If it is expected that the market will perform well will have a beta greater value and otherwise takes a smaller value. For this purpose, a common investment fund's monthly returns of 53 Mutual Funds were studied. The results of this study suggest that the beta of Mutual Funds was about 0.49 units higher when there waiting for the proper performance of the market than the beta of the funds in normal conditions and the amount of C in the regression equation used Henriksson and Merton significantly is positive. In other words, the existence market timing in investment funds of Iran on a monthly basis is confirmed

Keywords:

Market timing, Performance evaluation, Mutual Funds

1. Introduction

We need to direct the economic resources ted towards productive activities and industries in order to overcome economic obstacle or at least reduce their impacts. It is necessary to expand these activities in the community funds and savings of families into investments to be directed wandering. Of course, this cannot be done, unless the money and capital markets and related facilities spread.

Common investment funds, financial institutions with the aim to collect funds from new investors and assign it to buy securities in order to reduce investment risk, taking advantage of economies of scale and create common output for investors in recent years have been designed. These funds including financial institutions interface that makes reconciliation nonprofessional investors have professional markets. The structure is designed for financial institutions in Iran for the first time in 1386, according to the Securities Market Act have emerged such that two regulatory elements and management elements that have been considered. Multiple elements embedded monitoring fund performance and continuous monitoring mechanism, policies to increase internal controls, risk mitigation assets and finally earn a reasonable output in accordance with accepted risk levels leads.

The last step in the process of investment management, Portfolio function evaluation process, but it can be used as a feedback mechanism and control, in order to more effectively manage the investment process used. Performance evaluation involves two basic steps, the first step in evaluating the function, determine whether favorable or unfavorable function. The second step is to determine whether this function was the result of luck or the result of expertise, has been achieved.

Efforts have been made in assessing the function of common investment funds and measures used to evaluate the function of these funds have been developed. However, it is not clear what criteria do not exist when the agreement on the scoreboard Fund, is stronger. The question is whether include of the market shift funds between investment portfolio and an asset to make market indicators such as short-term bonds, depends on whether the market is expected in the whole of the assets to make better or worse?

2. Literature Review

To promote the funds, the Securities and Exchange Organization expanded and diversified investment instruments available for investors and authorized the structure of mutual funds. So buy certificates of these funds to retail investors and individuals who want to invest in stocks and other securities are listed on the stock exchange, but due to lack of adequate analytical capacity, lack of time to determine the contribution and etc. Not familiar with the market mechanism, is favorable. Private investor in a fund that meets investment certificates issued the owner of a number of units of the investment fund. Investment Certificate is a document issued by the Fund as an investor and introduced a number of investment units owned by the investor. Unit Investment Fund, which is the smallest component according to the initial capital fund to invest in warrants issued and the amount of his contribution to the Fund.

Mutual investment funds with variable capital funds and their investment will change every day, investment companies with fixed capital, and only in case of holding the extraordinary general meeting of the company's capital increase or decrease. Common investment funds with Open-End Funds with investment companies with Close-End Funds are similar in portfolio management. The investment companies with Close-End Funds, investors buy and sell shares of companies should be referred to the Stock Exchange trading fee, the investment company's shares trade on the market. common investment funds redemption investment is only through the Fund units are also required to annul the stated price guarantee liquidity at the end of the day that the Fund's investment in the provision of liquidity for units redeemed he does. Regarding investment companies with Close-End Funds, supply and demand determines the price of shares in the market is that in most cases the market price differs from the Net Asset Value (NAV). While investment funds, the price per unit of the Fund at the end of each day, after the close of trading floor of the stock exchange and the determination of the Net Asset Value (NAV) of the Fund, to be determined. Investors are referred to the investment fund for investment, issue units of investment and withdrawal of investment for the request for annulment of their investment. Investment funds with capital are variable and based on the request for the issuance or cancellation of investment

fund units, the amount of capital it will change. But investment companies with fixed capital, only the increase or decrease of capital due to the action.

In modern portfolio theory, the variability of output around the average, is considered the risk to be measured by the variance or standard deviation. The average value fluctuation is low. In other words, variance for symmetric risk is of course not true in the real world investors. In a growing market, we have to look into the possibility of further volatility, but volatility in the market should avoid recession. From a special perspective, risk is not symmetrical, and skewed. Markowitz with the definition of investment risk in the form of quantitative, a quantitative approach to asset selection and portfolio management provided to investors. This modern portfolio theory's assumptions unsatisfactory theory is as follows:

1) All securities and asset distribution is normal.
2) Variance of return on assets is a good indicator for measuring risk.

On the other hand, post modern portfolio theory also explains that the specific objectives of each investor's investment risk node and each result will be higher than the target, the risk will not be deemed financial or economic. Index "downside risk" post modern portfolio theory, a clear separation between favorable and unfavorable for the volatility. In this theory, just below the target rate volatility, a risk and higher returns to all of this uncertainty is said to be risk-free opportunities for return except the unexpected. In this theory, the rate of return target "minimum acceptable outcome".

In the post modern portfolio theory, modern portfolio theory can be seen two major developments:

1) The use of downside risk rather than standard deviation (SD), as a risk assessment tool
2) Post modern portfolio theory also encompasses non-normal efficiency distributions.

In summary it can be said that modern portfolio theory based on the relationship between return and risk is calculated by the standard deviation is explained, while post modern portfolio theory to explain the relationship between return and risk adverse investor behavior and optimal portfolio selection of deals.

Market timing with the beta value by Henriksson and Merton suggested. The researchers suggest that beta portfolio takes only two values: If you expect that the market will perform well, the beta value will be larger, and otherwise the value will be smaller. With this design the specification sheet securities (SCL) in the regression equation is as follows:

$$r\,p - r\,f = a + b\,(r\,M - r\,f) + c\,(r\,M - r\,f)\,D + e\,p$$

D is a virtual variable: if r f $<$r M is, D is equal to 1 and otherwise is zero. Thus, the beta portfolio investment in the pessimistic markets is equal to b+ c. Positive value in C means the ability of the Market timing.

Muralidhar Prasad Ayaluru (2016) [1] reviewed in his study 10 top performing schemes offered by Reliance Mutual Funds was selected to make a comparative study on the risk and return offered by these funds. From the study it is observed that among the selected funds Reliance Small cap fund is considered as a fund with moderate risk as well as moderate returns, against which the Reliance Bank Fund is considered as high risk with high returns.

Pourzamani et al (2012) [2] in a study as a comparison of performance-based common investment funds of Sharp, optimal potential and efficiency to the conclusion that in Iran capital market, a common investment between the rankings of funds based on the ratio Sharp, the actual growth rate and the favorable potential there is a significant correlation.

Shahbazi (2011) [3] in a study as a stock mutual fund function measurement using modern methods (empirical evidence: Tehran Stock Exchange), the comparative rank funds based on different criteria, develop criteria for performance evaluation (which characterizes its main use is downside risk) and the relationship between market returns and pay fund returns. The results of the hypothetical test (Pearson and Spearman correlation test using the software Minitab) showed that ratings of traditional and modern methods is almost the same and there is no significant difference between them. The average efficiency funds is a significant correlation with market efficiency.

Amir Alimi (2010) [4] in the master's thesis under the common investment funds to help solve portfolio optimization phase multi-objective problems, funds investing in America's Nazdak exchange group and a small group of common investment funds as a

superior group and then using phase multi-objective and non-linear models of portfolio selection and the percentage invested in each group has set.

Saeedi and Moghaddasian (2010) [5] in a study titled evaluate the function of investment funds in Iran to evaluate the performance of mutual fund shares according to risk-adjusted return based on the criteria it uses sharp, triner, and Jensen and Sortino. Based on the results of risk-adjusted return based on adjusted beta coefficient funds based on market yields no significant difference. Also, the performance of joint venture funds according to the criteria Sharpe, Sortino Trainer and there is no significant difference, but there is a significant difference between the performance benchmark yield differential Jensen different investment funds in the years studied did not rule.

Cuthbertson et al (2010) [6] study in the UK as the ability market timing Mutual investment funds England with nonparametric method market timing investment funds and balancing skills to the test. Their study used regression analysis to study Trainor and Mazoy (1966) [7] and Henriksson and Merton (1981) [3]In this study, researchers found that about 1% of the Fund's positive assessment of the ability to position and 19% of the funds surveyed have a negative timing.

Swinkels and Rzezniczak (2009) [7] in a study evaluating the function of fund managers as a joint venture Poland to empirically evaluate the function of common investment funds. They have three categories of funds, the research joint venture equity funds, balanced funds and bond funds have been the. The study found that for each of these three categories is a positive relationship between heuristic managers and timing skills, but there's no sense.

Javed et al (2008) [8] in Sweden on risk management as the performance of investment funds (beta and standard deviation) as well as features such well-known fund, growth in costs and management on the performance of investment funds examined. The researchers in this study concluded that the risk is higher, the higher the fund's efficiency. In this study, as well as Management Tenure is the same portfolio manager and course records he has been the impact on fund returns. In this study, it has not affected the efficiency of funds.

Haung et al (2008) [9] in a study as common investment funds function and risk transfer found that the level of risk funds have been significant changes over time. Their research has examined whether the

change has no effect on the risk level of the fund or not? Using criteria based on risk retention and transfer, they found that funds that have varying levels of risk over time and regularly change their risk from one level to another level much lower performance compared to those of the funds which over time have been kept your risk.

Arugaslan et al (2007) [10] on the assessment of fund management investment with Great America using criteria based on risk-adjusted function over the period 2000 to 2004 with 20 funds examined. The results show that the joint venture fund with high returns may be less attractive at a time when the risk analysis is linked to lose. In contrast, some investment funds may be lower risk when they are linked to the performance look great. The study also explains how financial leverage can enhance returns on low-risk common investment funds with used.

3. Methodology

The present study investigates whether mutual funds in Iran do market timing or not, The proposed model Henriksson and Merton(2008). So, hypothetically expressed as follows:

"The beta value of investment funds in the market when the expected efficiency for the period after the expected efficiency is high risk, the larger the market the next period when output is estimated lower than the risk-free *efficiency."*

This type of study is applied research, the nature of the research is to describe the systematic correlation between the present situation and so the attributes and characteristics of the study variables and studied the connection between the variables.

Since the common investment funds licensed by the Securities Exchange are required to comply with laws, regulations and specific requirements of the operation and reporters. On the other hand detailed and continuous monitoring of their activities, causing the relative transparency of information has been provided by the fund. Therefore, because of the specific requirements regarding reporting and ease of access to information about it, can be shared investment funds as selected population.

Research common investment funds in the spatial domain common stock from the Stock Exchange activities are licensed.

Considering the time domain to the creation of the first common funds at the beginning of 2008, the same

time begins. The end of the research is the end of September 2013.

In the present study to determine the sample, the method used is purposive or judgment. In this type of sampling, sample selection is based on personal judgment or study purposes. The sample in this study includes those investment funds are common:

A. until the end of March 1391 been established for at least six months from the start so that they have.
B. be operating by the end of September 1392.
C. investment funds are common in stock.

According to the above requirement, the funds, 53 funds were left.

In this study, the theoretical foundations of information and review of previous research using library resources, books and articles in the University Library and Web sites has collected and to obtain the information you need to test the hypothesis the research method used is mining documents. Thus, the information required from the information released by the Tehran Stock Exchange and financial data processing center's website www.fipiran.com has been extracted. All this research using any of the funds information available on the Web sites that the software is supported Rayan Hamafza and Tadbir Pardaz were collected by Excel software edit and processing has been accomplished. Data collected from 53 common investment funds were classified as monthly and after calculating the variables, to check for correlation with statistical software Eviews 6, have been transferred.

Independent and dependent variables of this study are calculated as follows and explained:

In this study, the dependent variable is the investment fund efficiency portfolio minus risk-free efficiency.

In this study, the independent variable is the market return minus the risk-free return. If the virtual variable coefficient value of a variable b+c will be available and when a virtual variable is equal to zero coefficient will b.

The model used in this study to test the hypothesis is as follows:

$$r_p - r_f = a + b(r_M - r_f) + c(r_M - r_f)D + e_p \quad (1)$$

In the above model:
rp: Portfolio efficiency of common investment funds
rf: risk-free efficiency
rM: market efficiency

4. Results

Appropriate in any research using descriptive statistics can be expressed exactly features a bunch of information, organized and summarized. Descriptive statistics were used to determine the characteristics always used to research information. Table 1 shows the relationship between the variables descriptive statistics which contains information about the mean, median, maximum and minimum and so on.

In according to goal of research that is include consider market timing common investment funds practice regression. For estimate data use of consolidated method pooled for resolves problem estimators and regarding to deconstruction data use of GLS approach in this researches.

Since it is necessary static variables used in the estimate data should be evaluated. Unit root test results by LLc in the table given below. Based on these results, zero hypothesis regarding to unit root variables or non-stability its in level 0.5 important rejected.

Summary results of the analysis of the data and practice the model in the table (2) reflected.

Table 1: Results of descriptive statistics related variables

Variable	Average	Middle	Maximum	Minimum	Standard deviation
r p - r f	017/0	0077/0	443/0	159 / 0-	0/067
(r M - r f)	037/0	024/0	131/0	0.00	0/042
(r M - r f) D	021/0	024/0	131/0	12 / 0-	0/059

Source: Calculations researcher

Table 2: Results of panel unit root test

Zero probability of acceptance	Dickey-Fuller	Statistic Value		Variable symbol	Variable
0.000	-13.95832	1%	-3.433427	Y	$r_p - r_f$
		5%	-2.862786		
		10%	-2.567479		
0.000	-13.79542	1%	-3.433430	X_1	$(R_M - r_f)$
		5%	-2.862787		
		10%	-2.567480		
0.000	-14.53409	1%	-3.433430	X_2	$(R_M - r_f)D$
		5%	-2.862787		
		10%	-2.567480		

Source: Calculations researcher

Conclusion related to estimation model in this study with consider GLS approach for estimate intend coefficients shows in the table. As conclusion shows maximum of coefficients estimate in model of meaningful needed in meaningful level 5 percent (with 95 percent trust) and symbol related to this coefficients also in terms of theoretical acceptable.

The table related to the practice research model are as follows:

Table 3: Results of Regression Test

Prob.	t-Statistic	Std. Error	Coefficient	Variable
0	-49.75789	0.000248	-0.012316	C
0	84.612	0.006568	0.555754	X1
0	53.15772	0.009176	0.487757	X2
				Fixed Effects (Cross)
		4.31E-16		$C_{i=}$
		I= 1,2,3,4,…,53		

Source: Calculations researcher

5. Discussion and Conclusion

In this study we examined if there is market timing in Iranian mutual funds or no as a kind of better performance than the rest of the market. As Henriksson and Merton, we supposed that if the portfolio's beta in the period before bearish market is meaningfully less that the beta of bullish market. Due to a significant and positive variable coefficient in the model, which means the positive significant amount of C is for investment funds, it can be concluded that beta investment funds when there waiting for the proper functioning of the market, about 0.49 units

More than beta funds in normal conditions and the amount of C Henriksson and Merton in the regression equation used is significantly positive. In other words, the existence market timing in Iran's investment funds on a monthly basis is confirmed.

Therefore, C amount for 19 investment funds were meaningful. From this funds, 2 funds have market timing in reverse form (C was negative) and market timing 17 funds in monthly intervals confirmed. According to comparison data research with Cusbertson et al (2010) [1] data and also can stated

that market timing in Iran is more than other countries that this research in market capital.

This results can help the investors to find the funds or fund's manager who are actively beating the market and their performance were not due to chance. In addition fund's manager can use active market timing as a main strategy in their active portfolio management.

References

1) Ayaluru M. P.,(2016). Performance Analysis of Mutual Funds, Parikalpana - KIIT Journal of Management

2) Pourzamani, Zahra, Ali Rouhi and Amirmohammad Safari. (2010). The effect of environmental factors on the efficiency of fund management joint venture in Iran. Journal of Management 21 (86): 101-85.

3) Shahbazi, Davoud. (2011). Stock mutual fund performance measurement using modern methods (empirical evidence: Tehran Stock Exchange). Financial Management Master's thesis, University of Economic Sciences.

4) Alimi, Amir (2010). A joint venture fund portfolio optimization with the help of fuzzy multi-objective problems. Financial engineering master's thesis, University of Qazvin.

5) Saiedi, Ali and Iman Moghadasian.(2010). Evaluating the performance of fund equity investments in Iran. Journal Stock Exchange 1 (9): 24-5 .

6) RADFAR, M. (1385). Understanding mutual funds. Journal exchange 10 (57): 13-8.

7) Securities and Exchange Organization. (2006). Mutual funds, the nature and necessity of the establishment in Iran.Tehran: Publishing information and services exchange.

8) Saiedi, Ali, Ghasem Mohseni and Saied Moshtagh. (2010). Factors affecting the efficiency of investment funds in stock in Tehran Stock Exchange. Quarterly Stock Exchange 2 (10): 141-123 .

9) Cuthbertson.K., D. Nitzsche, and N. O'Sullivan. (The 2010th) The Mutual Fund Market Timing Ability of UK. Journal of Business, Finance and Accounting 37 (1): two hundred seventy to two hundred and eighty-nine.

10) Swinkels, E., P. Rzezniczak. (2009). Performance Evaluation of Mutual Fund Managers Polish. International Journal of Emerging Markets 4 (1): 26-42.

11) Javed, AA (2008). Swedish Mutual Fund Performance. Master Degree Project 55: 10-35.

12) Arugaslan, O., E. Edwards, and A. Samant. (2007). Evaluating Equity Mutual Funds Using Risk-Adjusted Large US-Based Performance Measures. International Journal of Commerce and Management 17 (1-2): 6-24.

13) Estrada, J. (2000). The Cost of Equity in Emerging Markets: A Downside Risk Approach. IESE Business School of Barcelona, Spain.

14) Haung, J., C. Sialm, and H. Zhang. (2008). Risk Shifting and Mutual Fund Performance.Available at SSRN: http: //SSRN.com.

15) www.rdis.ir

16) www.fipiran.com