

The Performance of Chinese Mutual Funds

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Abstract

This paper studies the performance of mutual funds in China market during July 2003 to December 2007. We use top 50 companies' invested by mutual funds to measure the performance of mutual funds in the Chinese market via CAPM model. The empirical results show that the performance of mutual funds has a poorer performance than the stock markets, especially during the period of economic growth.

Keywords: Mutual Fund, Performance, Mainland China, Mutual Fund Performance

INTRODUCTION

Up to today, mutual fund investments continue to remain a robust and integral part of the mainland China investment portfolios and have been increasing for many years. The energy of mutual funds condensing no longer allows us to treat them slightly because the momentum of mutual funds is like a snowball that gets bigger and bigger. That it affects the worldwide economy is not a question but a comprehensive influence. According to Emerging Portfolio Research statistics, the total amount of mutual funds amounted to 5 trillion U.S. dollars in 2005, and the family number has reached as high as 100,000,000. If these mutual funds have somewhat similar behaviors, the overall influence of a country can be imagined. Therefore, it is worthy to study the reasons behind the subjects of behavior patterns and performance of mutual funds. After understanding the characteristics of mutual funds, the funds' control can be appropriate and natural - just like fish in water; otherwise, the strength of mutual funds will cause a state economy collapse.

Moreover, from inflow behaviors, it can be studied whether they would affect the return in mutual fund investments. The mutual funds have started to transfer their money into China every year since 1999 and its size has surpassed 35% of the total mutual fund size invested in Asian emerging markets since 2004. Therefore, we have to identify the impact of mutual funds on the performance in China. Meanwhile, we could provide different results from inflow and performance of mutual funds to individual investors for investment suggestions to bring the maximized individual investment gains.

Literature Review

In China, mutual funds have become a popular product because mutual funds provide many advantages, such as time-saving, convenience, etc... The new trend has resulted in increasing the appreciable funds. According to Asiaweek (2001), the emerging Asian countries like China, Indonesia, India, Malaysia, and the Philippines anticipate growing by double digits annually and are predicted to reach U.S. \$12 trillion by the year 2030. Thus, the performance of mutual funds is a seeking target for portfolio managers. Relatively, performance is an important ingredient to challenge individual investors preferring to invest into mutual funds.

As discussed by Santini and Aber (1998), the Sharp measure (SH) and the return in excess of the short-term rate (MXSHORT) are able to completely describe the funds' performance and new money flows are positive and highly significant covering the period from the first quarter of 1973 to the third quarter of 1985, including one

hundred twenty-seven¹ open-end equity mutual funds sample. Since the funds' performance are related to inflow behavior, Silva, Saprà and Thorley (2001) measured the performance of mutual funds compared to stock index and found out that the return of mutual funds is excess to the stock index via Sharpe's argument about the link between the average return on stocks and funds to stock and fund return dispersion. They used the CRSP Center for Research in Security Prices database which contains returns on all U.S. stocks from National Association of Securities Dealers Automated Quotation (NASDAQ) Shares during 1926 to 1973 and Amex Shares from 1926 to 1963.

The performance of mutual funds exhibit a higher return than the stock market was also reported in Change (1996). The study regards whether the mutual fund induces have a better investment performance than the overall performance of the stock market via Market Return and Wilcoxon methods through three different stock markets² in Taiwan, so as to offer the investors some reference data. Furthermore, it tested whether the performance of mutual fund is greater than the market portfolio and non-foreign capital conceptual stock by Sharpe, Treynor and Jensen's methods. This study found out the performance of mutual funds is better than the market portfolio. Finally, using the independent test method probes into whether rising or falling of the day (prior day) indices has a significant relationship with overbuy and oversell volumes of the day. The empirical results showed that the performance of mutual funds is greater than bear and great bear stock markets. On the contrary, the performance of mutual fund is inferior to the stock market in bull market. Also, on the prior day, one stock that has the largest buying volume from the mutual fund has a better return in any markets, bull, bear, and great bear markets, compared to the market portfolio. If the investors just followed the mutual fund and buy the same large stock the following day, investors can get a better than expected return in bull and great bear markets, except for the bear market.

Related to the above results are the results for Ming-Hua Kuo and Chun-Chung Chi (2000). They collected the top 30 Taiwan companies invested by mutual funds and divided them into pre-crisis, on-crisis, and post-crisis groups. They used return and volatility models to study if the mutual fund herding behavior induces a better investment performance than the overall performance of Taiwan's stock market, so as to offer the investors some reference data. The results show that the overall investment performance of mutual funds is better than the index performance, especially during the period of financial crisis. Thus, they suggested investors to pour their money into mutual funds for stock investment when facing high uncertainties.

However, previous research papers pointed out the different area has different achievement for the performance of mutual funds compared to market index. For example, Chang et al. (1995) showed that 15 closed-end country funds underperformed in the Morgan Stanley Capital International (MSCI) world market index for the testing time from 1989 to 1990, except the Mexico Fund. While Gallo and Swanson (1996) reported that the performance of open-end international funds in the U.S., these funds have poorer performance than the Morgan Stanley Capital International.

Moreover, Patro (2001) explicitly stated that different sample periods also have different outcomes. He pointed out the net asset values (NAVs) or shares of the 45 U.S. based international closed-end funds underperform their local or the world market indices over the testing time 1991-1997; this differs from his empirical result that the funds match the performance of the world market index during 1991-1997. Therefore, how to provide a comprehensive empirical analysis of the mutual fund performance is the main mission of this study.

From the above reference papers, the performance will have different outcomes in different areas, sampling time, or under some external factors. Thus, this study will find the robust information in China that researchers didn't study in order to be a choosing mutual fund criterion for portfolio managers and investors.

Data and Methodology

Numerous studies observe the mutual funds' performance by comparing the index of the stock market (Detzler 1999, Campbell, Lettau, Malkiel and Xu 2001). Some researchers consider the performance of open-end

¹ One hundred twenty-seven mutual funds are including 79 load funds and 48 no-load funds.

² Three markets are bull market (January 1994~ December 1994), bear market (January 1995~ February 1996), and great bear market (January 1994~ February 1996).

international funds in the U.S. is inferior to the market index such as Cumby and Glen (1990), but some researchers find evidence that the performance of international funds is superior using a two-factor arbitrage pricing theory (APT) model, as by Gallo and Swanson (1996). However, what exhibition of mutual fund performance is in China? Next are the data sources first to figure out the status of mutual fund performance in China. The data collection period is from July 2003 to December 2007, and the data sources come from two databases as shown as below:

1. Market value returns of China companies invested by mutual funds: The People’s Bank of China (PBC) database.
2. Market value returns of Shanghai and Shenzhen A shares: Taiwan Economic Journal (TEJ) database.

This study collected the top 50 China companies’ liquid market capitalization invested by mutual funds. The fifty companies are covered by the Shanghai and Shenzhen markets, so the companies will discriminate the Shanghai from the Shenzhen markets. Hence, thirty four companies belong to Shanghai and sixteen belong to Shenzhen. Some companies are new and the amount of data is not enough to match the test period from July 2003 to December 2007, so this study ignores ten companies in Shanghai and one company in Shenzhen. Therefore, the total testing companies are thirty nine companies.

Empirical Models

Sirri and Tufano (1998) find that new cash inflow to the mutual fund industry is positively related to prior market returns. Therefore, this section is based on Karceski’s research (2002) that market returns have a large economic impact on subsequent aggregate mutual fund inflows via Capital Asset Pricing Model (CAPM). The CAPM is an important model in the field of finance. It explains variations in the return rate on a security as a function of the return rate as on portfolio consisting of all publicly traded stocks. Generally, the return rate in any investment is measured relative to its systematic risk or risk premium - beta. The beta on security is proportional to the beta on the market portfolio.

The ordinary least squares (OLS) method examines the overall fund performance after multiple mutual funds are contributed. Considerable previous research studies investigated the mutual fund performance via ordinary least squares regression analysis (Apap and Griffith 1998, Peterson, Pietranico, Riepe, and Xu 2002, Costa and Porter 2003). This study will use ordinary least squares to examine the mutual fund performance compared to the market index.

This section presents two models where mutual fund performance are compared to market value returns of two A share markets, Shanghai and Shenzhen, by the standard CAPM model. Model II of the Shanghai market is written as below:

$$TShMVR_t - Int_t = \alpha + \beta_j (ShMVR_{A,t} - Int_t) \text{-----} (II)$$

Where

$TShMVR_t$ and Int_t are the returns to top 24 Shanghai companies’ liquid market value invested by mutual funds in period t and the risk-free rate as 3-month certificates of deposit rate in period t , $ShMVR_{A,t}$ is the return on the Shanghai A share’s market value in period t , β_j is the systematic risk of asset j , and α stands for constant.

The model III of mutual fund performance in Shenzhen market is written by:

$$TSzMVR_t - Int_t = \alpha + \beta_j (SzMVR_{B,t} - Int_t) \text{-----} (III)$$

Where:

$TSzMVR_t$ is the returns to the top 15 Shenzhen companies' liquid market value invested by mutual funds in period t , Int_t is risk-free rate as 3-month certificates of deposit rate in period t , $SzMVR_{A,t}$ is the return on the Shenzhen A share's market value in period t , β_j is the systematic risk of asset j , and α represents constant.

Empirical Results

Table 1-1 indicates mutual fund performance. Model II and III analyze mutual fund performance, and the results for Model II and III are displayed in Table 1-1. The result of the Shanghai A stock market value returns (ShMVR_A) versus Shanghai's top 24 companies' liquid market value returns invested by mutual funds (TShMRV) is on the left-hand side of Table 4-12. It shows that the returns of Shanghai A-shares market value (ShMVR_A) increased 1 %, and Shanghai's top 24 companies' liquid market value returns invested by mutual funds (TShMRV) increased 0.65%. The Shenzhen A stock market on the right-hand side of Table 4-12 shows that the returns of Shenzhen A-shares market value (SzMVR_A) increased 1 %, and Shenzhen's top 19 companies' liquid market value returns invested by mutual funds (TSzMRV) increased 0.88%.

Both markets' mutual fund performance is inferior to the market indices' performance. The performance of mutual funds in the Shenzhen stock market is better than the Shanghai stock market; especially, the Shanghai A stock market is taken more seriously by foreign investors than the Shenzhen A stock market based on the empirical results from Tables 4-8 and 4-9, which indicate that the Shanghai A stock market is the principal factor to attract the mutual fund entry into the Chinese market. The reasons behind this phenomenon are numerous, for example, different mutual fund managers have different choosing ability, professional knowledge, or extraneous factors.

Table 1-1: Regression Analysis of Mutual Fund Performance

Shanghai Mutual Fund Performance		Shenzhen Mutual Fund Performance	
ShMVR _A	0.6533	SzMVR _A	0.8784
	(0.1028)		(0.08276)
Adjusted R ²	0.4265	Adjusted R ²	0.6781
Observations	54	Observations	54

Note¹: $ShMVR_A$ are returns of Shanghai A-shares market value, and $SzMVR_A$ are returns on the Shenzhen A-shares market value.

Note²: Depend variables are Shanghai top 24 companies' liquid market value returns invested by mutual funds, and Shenzhen is top 15 companies' liquid market value returns invested by mutual funds.

Note³: The figure in parenthesis represents stand deviation value; *, **, *** represent 10%, 5%, and 1% significant level.

Note⁴: The test period is from July 2003 to December 2007.

Note⁵: Adjusted R₂ data is for comparison of model fit from year to year.

Conclusion

The paper documents the results of mutual fund performance with similar results of several other empirical research papers (Cumby and Glen 1990, Chang, Eun, and Kolodny 1995, Gallo and Swanson 1996). It shows that the performance of mutual funds is inferior to the general performance of China's stock markets, especially the

mutual fund performance in the Shanghai stock market. There is an underperformance of mutual funds in the Shenzhen stock market. This can provide useful and relevant results for investors. Funds are basically managed by fund managers who aim to make returns and create their performance, so as to attract more funds under their management. Thus, they should either have an in-depth understanding of the fund's nature or have the specialized ability of choosing stocks.

Even with the economic opening and gross domestic product growth every year in China, citizens' access to the stock markets are not through mutual fund managers since they are in the era of people buying stocks and people earning stocks similar to Taiwan in the 90's. At that time, people invested in stock markets by themselves and did not go through mutual fund managers because there was less risk, fewer handling fees, and more returns in the stock markets. Many years later, as the stock markets became riskier, investors also changed their habits and utilized mutual fund managers since the overall investment performance of mutual funds is better than the index performance in Taiwan as the result as Ming-Hua Kuo and Chun-Chung Chi (2000).

The results show that the overall investment performance of mutual funds has a poorer performance than the index performance, especially during the period of economic growth. Meanwhile, this information has the significance for the application.

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