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Full length article

Performance persistence in institutional investment management: The case of Chinese equity funds

Zia-ur-Rehman Rao*, Amjad Iqbal, Muhammad Zubair Tauni

School of Accounting, Dongbei University of Finance and Economics, Dalian, China

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Abstract

This paper investigates the performance and persistence in performance of equity funds in China. We apply the capital asset pricing model (CAPM) and the Carhart four-factor model to examine 520 equity funds for an eleven-year period with 39,449 observations. To investigate persistence, the entire sample is divided into ten portfolios (deciles) on the basis of lagged one-year performance and then observed over the next 12 months. We find that equity funds in China outperform their benchmark market but do not find any evidence of persistence in the performance of equity funds. Top-performing (worst-performing) funds do not continue to perform well (worse) in the following year. Top-performing funds are younger and have lower expense ratios than the worst-performing funds. However, the size of the top-performing funds and the worst-performing funds show no significant difference. Our results suggest that past performance of equity funds is not predictive of future fund performance.

JEL classification: G11; G12; G20

Keywords: Emerging markets; Equity mutual funds; Expense ratio; China; Performance; Persistence

1. Introduction

Analyzing the performance of mutual funds and persistence in their performance is important for both practitioners and academics. Investors believe that fund managers possess superior capabilities, and financial analysts investigate those fund managers' capabilities by analyzing the returns of equity mutual funds. Measuring fund performance is vital in the mutual fund industry, as current and potential investors watch fund performance over time. Therefore, performance information may be very influential for cash inflow and outflow from the funds. Moreover, from academic point of view, examining fund managers' skills is equivalent to testing the efficient market hypothesis.

A comparison of the performance of mutual funds and the stock market has long been a topic of discussion, and many studies have compared them, but the results are not unanimous. Some papers find that mutual funds outperform the stock market (see Białkowski & Otten, 2011; Huij & Post, 2011; Swinkels & Rzezniczak, 2009). However, Hayat and Kraeuss (2011), Otten and Bams (2002), and Christensen (2013) show that mutual funds are unable to beat the market and give lower returns than the market. Tang, Wang, and Xu (2012), Chi (2013), and Kiymaz (2015) examine Chinese funds' performance and report that equity funds outperform the benchmark market.

A lot of work has been done on persistence in the performance of mutual funds in developed economies. Mutual funds with a higher (lower) return in a previous time period tend to provide higher (lower) return in the subsequent time period

* Corresponding author. Room-525, Bilin Lou, IICLC, Dongbei University of Finance and Economics, 217 Jianshan Street, Shahekou District, Dalian 116025, Liaoning, China. Tel.: +86 15502643607.

E-mail addresses: ziarao@hotmail.com (Z.-u.-R. Rao), amjadiqbal1987@yahoo.com (A. Iqbal), mzubair200@gmail.com (M.Z. Tauni).

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(Bollen & Busse, 2001; Huij & Post, 2011; Mamaysky, Spiegel, & Zhang, 2007). Several studies (e.g. Białkowski & Otten, 2011; Brown & Goetzmann, 1995; Hendricks, Patel, & Zeckhauser, 1993) have documented persistence in mutual fund performance over short time horizons, whereas, Grinblatt and Titman (1992), Elton, Gruber, and Blake (1996), and Allen and Tan (1999) find evidence of predictability in the performance of mutual funds over long time horizons. Brown and Goetzmann (1995) assert that the persistence of performance depends on the period under study. Chasing funds is a risky approach, and funds that performed well this time may fail greatly next time. Funds that performed well last year may become funds that perform badly the following year. Carhart (1997), however, shows that the “hot hands” effect is attributable to persistence in expense ratios and following persistence strategies. Białkowski and Otten (2011) report strong persistence in the performance of Polish mutual funds and Abdel-Kader and Qing (2007) find performance persistence in equity mutual funds in Hong Kong over the short term. Heffernan (2001) and Keswani and Stolin (2006) find persistence in the performance of UK equity funds. They find that persistence is higher among sectors in which the concentration of assets under management is higher. European equity funds witness persistence in performance over time (Goñi Ecay, 2014). Taiwanese, Korean, and Greek mutual funds also show persistence in their performance (see Babalos, Kostakis, & Philippas, 2007; Hou, 2012; Kang, Lee, & Lee, 2011).

By contrast, Casarin, Pelizzon, and Piva (2008) do not support persistence, as they do not find any evidence for it. Winner (loser) funds from last year do not continue to be winners (losers) the following year (Agarwal & Naik, 2000). Huang and Mahieu (2012) do not find persistence in the performance of Dutch pension funds over time. Vicente and Ferruz (2005) affirm that Spanish markets demonstrate no persistence in the performance of equity funds. Busse, Goyal, and Wahal (2010) report persistence in the performance of funds using CAPM and the Fama−French (Fama & French, 1993) three-factor model. However, they do not find any evidence of persistence in fund performance when they apply the Carhart four-factor model as a performance measure. Alves and Mendes (2011) find no evidence of a relationship between past performance and capital flow in Portuguese mutual fund markets, but they find persistence in mutual fund performance.

We conduct this research on Chinese equity funds for several reasons. The number of studies on emerging markets such as China, regarding persistence in mutual fund performance, is low compared to those on developed or advanced economies. China has one of the fastest-growing markets in Asia in terms of the investment fund market, and the Chinese market has attracted many foreign investors in the past several years. The Chinese mutual fund industry has experienced strong growth over the past 20 years, and in 2014 assets under management in China totaled $2.8 trillion. If trust and bank wealth-management products are counted, the total exceeds $16.2 trillion (Chen, Xiong, & Huang, 2014). In the early years of its development, growth in the asset management industry was not very strong. With the combined efforts of market participants and regulators, the Chinese mutual fund industry has grown substantially over the past 20 years. The existence of a high number of mutual funds in Chinese market implies that there is a competition among the mutual funds and they try to outperform the benchmark market in order to attract investors. This means that some fund managers possess superior skills that allow them to earn better returns for their investors. Unlike in developed countries, in China, a large proportion of trading is conducted by individual domestic investors. The significant existence of individual domestic investors there is in sharp contrast to the dominance of institutional investors in the United States. Institutional and foreign investors are considered better informed than individual domestic investors. Therefore, examining performance and performance persistence in China may not yield the same findings as in the United States. Thus, this paper explores the equity funds in one emerging economy dominated by individual investors who may not be very well informed.

Despite significant growth in the Chinese mutual fund industry, little is known about performance and performance persistence in Chinese equity funds. Therefore, a study on Chinese equity funds can contribute to the limited literature on mutual funds in emerging markets. Few studies have been done on persistence in the performance of Chinese mutual funds. Su, Zhao, Yi, and Dutta (2012) examine Chinese mutual funds and find persistence in the performance of mutual funds in the short run but not in the long term. They use a small sample of 42 funds with data for only seven years (2003−2009). Their study applies a simple approach and only compares raw returns with the benchmark market. Xu (2004) examines performance persistence in Chinese mutual funds but uses data for only three years (i.e. 2000−2002) and Li et al. (Xuefeng, Xi, & Yongfeng, 2007) take the data for only two years from year 2005 to 2006. In both these studies, time window is very small. Chen (2013) studies persistence in the performance of Chinese mutual funds using a sample of only 104 equity funds for a six-year period (2005−2010). His study does not use the Carhart four-factor model, which has become the standard measure for evaluating the performance of mutual funds. He finds evidence of performance persistence by Chinese mutual funds in the short run but not in the long run. Duan and Dong (2014) also investigate the performance persistence in Chinese mutual funds, studying only 215 mutual funds over a five-year period (2008−2012). Their study is not very elaborate and does not apply any of the models for measuring fund performance that have become the standard in finance literature, such as the CAPM, the Fama-French (Fama & French, 1993) three-factor model, or the Carhart four-factor model. They report very weak persistence in the performance of Chinese mutual funds. Our study is comparatively more elaborate, as we use a sample of 520 Chinese equity funds over an eleven-year period (2004−2014), which is uncontaminated by survivorship bias. To control the survivorship bias, those mutual funds are also included in the data that became dead or inactive during the period of study. Our study uses the CAPM and Carhart four-factor model to examine performance and divides the sample into ten deciles to investigate persistence in the performance of equity funds. To