

Is Chinese Mutual Fund a Good Choice of Investment?

Han Fan^{1,a,*}

¹*Finance Research Cluster, School of Business and Management, Queen Mary University of London, United Kingdom*

a. bsx141@qmul.ac.uk

**corresponding author*

Abstract: With the development of Chinese economy, Chinese household are wealthier and looking for good investing instrument. Meanwhile, Chinese mutual fund industry has grown to be the biggest category of asset management. Therefore, whether Chinese mutual fund is a good choice of investment become worth discussion. This article explore this question from 4 angles: the average performance, the performance persistence, the behavioral biases of mutual fund managers, and obstacles for investors from realizing profits. And we find Chinese mutual funds on average can beat their benchmark and their performance persists at least in the following year. However, mutual fund managers could be overconfidence especially after achieving good performance, and there are also behavioral biases of investors preventing them from making profit through mutual funds. In conclusion, even though Chinese mutual fund on average have relatively good returns, realizing profit through them is not an easy job.

Keywords: mutual funds, Chinese financial market, behavioral bias

1. Introduction

In the past few years, the assets management industry in China has been growing along with the development of Chinese economy. The total number of assets management products is 5.5 times compared to 10 years ago (from 34,540 to 191,730), and their total scale is 3.6 times bigger (from 19,861 billion RMB to 66,739 billion RMB).

Among them, mutual fund is gradually becoming the biggest category, and makes up 40% of total assets management industry. Their total scale increases to 27,480 billion RMB by the end of the 2nd quarter of 2023 according to Asset Management Association of China (henceforth AMAC) [1].

Why people chose mutual fund as their major investment instruments? The predominant reason is chasing relatively high returns. Yang and Yang [2] argue that the determinant factor of fund flows in China is stock returns. However, alongside with such return chasing behavior of mutual fund investors is their high risk aversion level, as 43.8% of the total scale of mutual funds are money market funds and total scale of bonds funds is 1.74 times of equity funds according to AMAC [3].

Therefore, given the characteristic of Chinese mutual fund investors, we could discuss how well do Chinese mutual funds perform, and this article is going to develop the arguments in the following aspects. Firstly, in terms of returns we could demonstrate the average return of Chinese mutual fund in each category, and especially their relative return compared with respective benchmarks. Moreover, the persistence of mutual fund performance is also worth discussion, as earning profit in a certain

period could be caused by luck, but constantly contributing alpha could hardly just be attributed by luck.

Secondly, regarding risks we could explore the behavioral biases of mutual fund managers, as they expose the fund return in risk. No matter how smart and professional mutual fund managers are described by the media and fund advertising, they are still human, and could suffer from the behavioral biases that retail investors are confronted with, for instance overconfidence and herding.

In conclusion, my research question is whether investing in actively managed mutual fund is a good idea in terms of both return and risk.

2. Performance of Actively Managed Mutual Funds in China

The data this article uses is from CSMAR and contains 7944 actively managed mutual funds in the last 5 years. After controlling extreme outliers, we find the average annual return of them is 5.71% and the average return of their benchmark is 1.4%, resulting in a 3.63% average relative return. More specifically, we could also demonstrate the probability distribution of relative returns of all actively managed mutual funds, which is shown below.

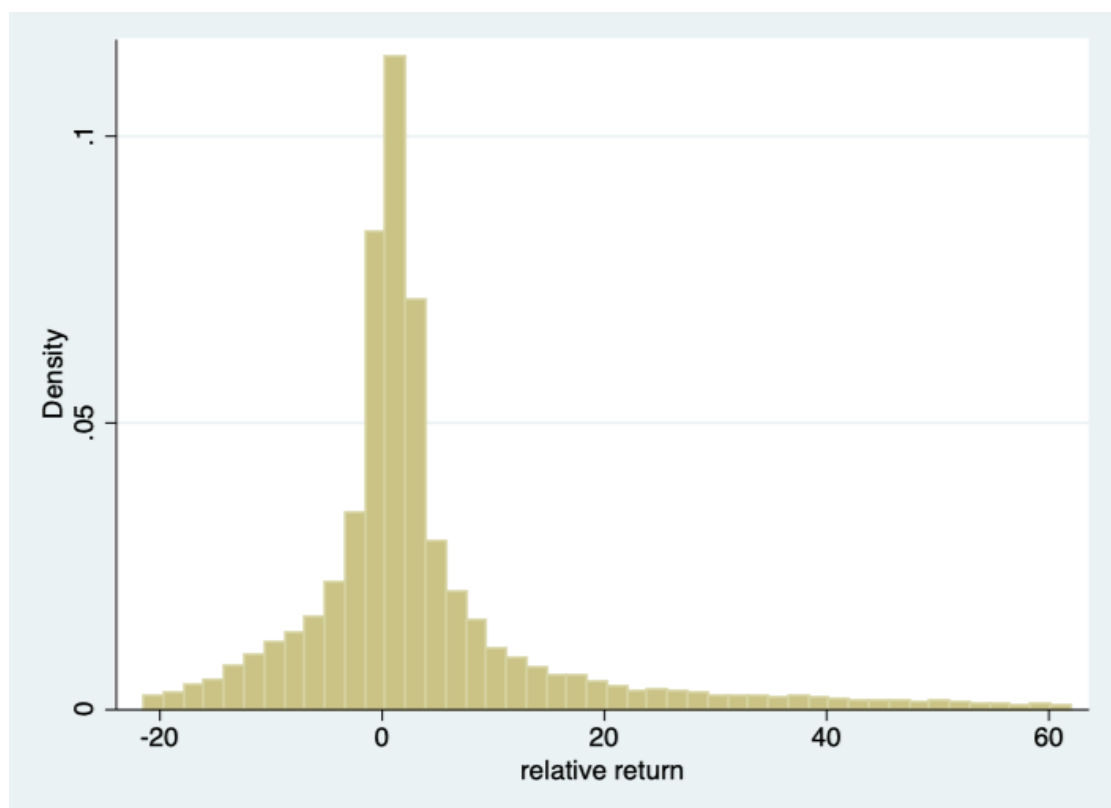


Figure 1: This Distribution of Relative Returns of Chinese Mutual Funds.

However, the simple average of relative returns in the last 5 years doesn't mean the compounded annual relative return in the same periods, and therefore, we calculated average of the later, which is 4.92%. Such result is higher than the simple average of 3.63%, but could also been exemplified by the survivorship bias. Because there are 6151 funds with records in 2018, but only 4837 have data of growth of net assets value (NAV) in last 5 years. Furthermore, Hartzmark and Solomon [4] point out we usually underestimate the performance of market indices, also benchmarks of mutual fund, by ignoring the dividends.

3. Performance persistence of actively managed mutual funds in China

There is another question awaits to be answered before choosing mutual funds as our investment instruments: the persistency of fund performance. As only if the past performance of funds somehow indicates their future returns can we take it as a reference.

Early researcher like Carhart [5] believes mutual fund perform persistently at least on short-term (one-year period), and such persistence could be largely explained by momentum of stocks. More specifically, top-decile funds are not necessarily still top, but are more likely to have above average returns in the next year, however, such persistence fade within 2 to 3 years. Therefore, his suggestions on choosing mutual fund seems to be rule-of-thumb: avoiding consistent bottom funds.

Similarly, Su et al. [6] also explore the question by examining whether funds' performance could beat their benchmarks using data on Chinese mutual funds industry from 2003 to 2009. They argue the short-term performance persistence relies largely on the market condition and there is no evidence of long term persistence

Cornell et al. [7] discuss the question through the angle of possibility and argue that the top 1% ranking Chinese mutual funds of their past returns only have 12% probability remaining in the 10% during the next period, merely better than noise. Consistent with their findings Rao et al. [8] believe there is no evidence of persistence of mutual fund performance in China.

Table 1 shows the possibility of winners (losers) remaining to be winners (losers) in the following period. We define winners (losers) simply as their returns higher (lower) than the average, and each row represents the possibility of repeat winners or losers after corresponding years. Consistent with the finding of Su et al. [6], we can hardly say mutual funds in China have performance persistence in the long term.

Table 1: Possibility of repeat winners (losers)

	2018	2019	2020	2021	average
1-year persistence	0.0938	0.8592	0.6470	0.3405	0.4851
2-year persistence	0.0479	0.5731	0.0634		0.3182
3-year persistence	0.0253	0.0365			0.0365

Furthermore, this article also adopt the method of Cornell et al. [7], calculating the possibility that the top 1% performing funds remaining to be top10% in the following years. As is shown in table 2, the 1% performing funds show persistence to some extent in the following year, but such persistency fade within 2 to 3 years.

Table 2: Possibility of top 1% funds remaining to be 10%

	2018	2019	2020	2021	average
1-year persistence	0	0.4242	0.5732	0.1038	0.2753
2-year persistence	0	0.1667	0		0.0556
3-year persistence	0	0			0

Correspondingly, we also present the possibility of 10% funds remaining to outperform the average return in the following period, as is shown in table 3. Similarly, to the performance persistence seems stronger within one year. Given that more than 56% of investors hold their mutual fund more than one year, such decision may need more consideration.

Table 3: Possibility of top 10% funds remaining to be 50%

	2018	2019	2020	2021	average
1-year persistence	0.0075	0.9541	0.5805	0.1553	0.4244
2-year persistence	0.0038	0.5170	0.0240		0.1816
3-year persistence	0.0019	0.0267			0.0143

4. Behavioral biases of mutual funds managers in China

Thaler [9] argues that behavioral biases, for instance overconfidence and disposition effect, are widely documented in worldwide financial market. And they usually lead to excessive trading and below-average returns, because behaviorally biased investors tend to overestimate their information and ability in choosing trading targets and trading timing, and underestimate the risk they are confronted with.

Fund managers are normally deemed to be professional and objective, however, however, Puetz and Ruenzi [10] examine their behavioral biases, and argue that they trade more frequently after good performance. Eshraghi and Taffler [11] also believe superior past performance could boost overconfidence and point out that it can brought negative impact on their funds' performance.

In this article, I also calculate the tendency of excessive trading of mutual fund managers, defining a variable transactionrate (TR) by the percentage of total transaction fee divided by a fund's total assets. And we find current winners will have higher TR (0.4444) in the following year compared with current losers (0.4085), indicating their tendency to trade more. More specifically, I also conduct a regression analysis to test whether return in current year influences their future transaction fee, where $\ln TF$ indicates the logarithm of a fund's total transaction fee when $t=1$, and $\ln TA$, $\ln R$ indicates a fund's total scale and total revenue when $t=0$. Also, top1%, top10%, and W/L refers to their ranking when $t=0$.

Table 4: Regression analysis of mutual funds' transaction fee tendency

VARIABLES	(1) $\ln TF$	(4) $\ln TF$	(3) $\ln TF$
$\ln TA$	0.158*** (5.22)	0.159*** (5.26)	0.107*** (3.15)
$\ln R$	0.729*** (30.70)	0.726*** (30.62)	0.798*** (28.35)
top1%	0.690*** (3.63)		
top10%		0.136** (1.97)	
W/L			0.515*** (7.83)
Constant	-1.278*** (-3.91)	-1.268*** (-3.78)	-2.010*** (-5.66)
Observations	5,675	5,675	4,904
R-squared	0.399	0.399	0.429

Consistent with the finding of Eshraghi and Taffler [11], good previous performance inspire mutual fund managers to trade more, and being ranked into the top 1% reinforcement such phenomenon.

5. Barriers of realizing profit for mutual fund investors

Despite the behavioral biases of mutual fund managers, there are other hindrances preventing investors from realizing profit, and they might be found from fund investors themselves. Del Guercio and Tkac [12] study the effect of Morningstar rating on mutual fund flows, and argue changes in Morningstar rating itself, despite the performance, draws additional inflows for fund. They believe investors take a short-cut when making financial decisions and rely largely on the rating rather than what such rating is based.

Barber, Huang, and Odean [13] further explore the Morningstar rating effect and point out more sophisticated investors, who are wealthier and have more experience, are less likely to be influenced. Recent study of Ben-David et al. [14] investigate the change of Morningstar rating methodology and demonstrate the power of the star rating effect. Prior to the change best, rating funds are highly concentrated in the best performing style group and thus cash also flows into such group. Therefore, we can witness gaps in funds' flows between top and bottom performing styles groups. However, after such small change in Morningstar rating method, the difference in funds' flows collapse, because best rating funds are evenly distributed in different style groups, and so as flows. Their finding indicates that a significant large group of investors greatly and simply rely on the Morningstar rating rather than the underlying managerial skills of fund managers.

I also test the performance-flow relationship with my data, which is shown in table 5, where lnPS refers to the logarithm of total purchased shares when $t=1$. I find that good performance attracts more flows, and being at the top 1%, rather than top 10% or 50%, also has a significant effect.

Table 5: Regression analysis of mutual funds' flows

VARIABLES	(1) lnPS	(2) lnPS	(3) lnPS
lnTA	0.617*** (15.85)	0.630*** (19.06)	0.626*** (18.82)
lnR	0.147*** (4.42)	0.107*** (3.81)	0.107*** (3.83)
W/L	0.019 (0.27)		
top10%		0.063 (0.57)	
top1%			1.134*** (5.71)
Constant	6.114*** (19.38)	6.634*** (22.81)	6.703*** (23.45)
Observations	6,553	7,999	7,999
R-squared	0.166	0.159	0.160

6. Conclusion

This article estimate the choice of actively managed mutual funds as an investing instrument using data from China from 2018 to 2022, and discuss the question in 4 aspects: the performance of Chinese mutual funds, the persistence of their performance, the existence of behavioral biases of mutual fund managers, and behavioral biases of investors themselves.

Firstly, the performance of Chinese mutual funds in the last 5 years is 3.6% higher than their benchmarks, and the compounded return rate correspondingly is 4.92%. Secondly, the performance of Chinese mutual funds persist at least in the following year. On average, 48.51% of winners (losers) are still winners (losers), and 27.53% of top 1% and 42.44% top 10% funds are respectively still top 10% and top 50% in the following year. Thirdly, consistent with Eshraghi and Taffler [11], mutual fund managers in China tend to trade more often and generate more transaction fee after getting good previous performance. Lastly, previous good performance helps funds to draw flows in China, and the ranking of top 1% also has an impact on the performance-flow relationship. In summary, mutual funds in China have their advantages and disadvantages, and there are also obstacles of making profits through them.

Ultimately, this article could extend the sample by including more data from 2003 to 2018, and this will help us better estimate the questions mentioned above. In addition, this article could discuss the questions more detailly, for instance, the performance persistence discussion could adopt more sophisticated Fama-French 3 factor model.

References

- [1] Asset Management Association of China. (2023). Mutual fund industry data. Available at <https://www.amac.org.cn/researchstatistics/datastatistics/mutualfundindustrydata/> [Accessed 13th November 2023]
- [2] Yang, T.Y. and Yang, Y.T. (2014). Determinants of inflow to mutual funds: criterion and methodology for their application to the mainland China market. *Journal of Behavioral Finance*, 15(3), pp.269-276.
- [3] Asset Management Association of China. (2022). National Public Fund Investor Survey Report in the year 2020. Available at <https://www.amac.org.cn/researchstatistics/report/tzzbg/202201/P020220107702402352747.pdf> [Accessed 18th November 2023]
- [4] Hartzmark, S.M. and Solomon, D.H. (2022). Reconsidering returns. *The Review of Financial Studies*, 35(1), pp.343-393.
- [5] Carhart, M.M. (1997). On persistence in mutual fund performance. *The Journal of finance*, 52(1), pp.57-82.
- [6] Su, R., Zhao, Y., Yi, R. and Dutta, A. (2012). Persistence in mutual fund returns: Evidence from China. *International Journal of Business and Social Science*, 3(13).
- [7] Cornell, B., Hsu, J., Kiefer, P. and Wool, P. (2020). Assessing mutual fund performance in China. *The Journal of Portfolio Management*, 46(5), pp.118-127.
- [8] Rao, Z.U.R., Tauni, M.Z., Ahsan, T. and Umar, M. (2020). Do mutual funds have consistency in their performance?. *Portuguese Economic Journal*, 19, pp.139-153.
- [9] Thaler, R. H. (1993). *Advances in behavioral finance* (Vol. 2). R. H. Thaler (Ed.). New York: Russell Sage Foundation. pp. 42.
- [10] Puetz, A., & Ruenzi, S. (2011). Overconfidence among professional investors: Evidence from mutual fund managers. *Journal of Business Finance & Accounting*, 38(5-6), 684-712.
- [11] Eshraghi, A. and Taffler, R. (2012). Fund manager overconfidence and investment performance: evidence from mutual funds. Available at SSRN, 2146864.
- [12] Del Guercio, D. and Tkac, P.A. (2008). Star power: The effect of monrningstar ratings on mutual fund flow. *Journal of Financial and Quantitative Analysis*, 43(4), pp.907-936.
- [13] Barber B. M., Huang X., Odean T. (2016). Which Factors Matter to Investors? Evidence from Mutual Fund Flows. *The Review of Financial Studies*, 29(10), pp.2600–2642.
- [14] Ben-David, I., Li, J., Rossi, A. and Song, Y. (2022). Ratings-driven demand and systematic price fluctuations. *The Review of Financial Studies*, 35(6), pp.2790-2838.