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The relationship between personal characteristics of fund managers and fund returns in short-term bull and bear markets

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Abstract: *We explore whether the personal characteristics of fund managers significantly affect fund returns during the short bull market and the short bear market. Although the impact of fund managers' personal characteristics on fund performance has always been a research hotspot in the financial sector, there are few articles on the impact of fund managers' personal characteristics on fund performance in short-term bull and bear markets. As we all know, since 2020, the coronavirus epidemic has continued to spread, which had brought significant pressure on economic growth and increased volatility in the stock market. In 2020, China's stock market experienced a wave of short-term bull market, and the stock price rose rapidly in a few months. At the same time, in early 2022, China's stock market experienced a wave of short-term bear market, and the stock price fell rapidly in a few months. This paper selects the fund data of a wave of short-term bull market and a wave of short-term bear market in 2020 and 2022, and uses the single factor ANOVA model to explore whether the five fund managers personal characteristics, including years of securities industry, years of fund managers' service in the fund, years of fund managers' career, gender, and level of education, have a significant impact on fund returns. Results show that the returns of fund managers with longer working years in securities market are higher than those of fund managers with shorter working years in securities market, and the losses of fund managers with longer working years in securities market are lower than those of fund managers with shorter working years in securities market. At the same time, gender and years of fund managers in the securities market significantly affect the performance of fund managers fund managers who have been fund managers for many years can avoid more losses in a bear market.*

Keywords: *Fund manager; Personal characteristics; Fund performance; Short-term bull market; Short-term bear market*

1. Introduction

In recent years, China's capital market has witnessed vigorous development. According to the latest data of China Securities Investment Fund Industry Association, as of the end of May 2022, the total number of public funds that have been put on the market has reached 10,077, exceeding the 10,000 mark, setting a milestone in the history of Chinese public funds; At the same time, according to the 2021 Securities Company Investor Service and Protection Report released by the China Securities Association, by the end of 2021, there are more than 720 million fund investors in China. With such a large number of fund investors and so many funds and fund managers, the personal characteristics of fund managers have become the focus of financial research. At the same time, the research on the relationship between fund managers' personal characteristics and fund returns can also help Chinese investors choose reasonable funds.

During the coronavirus epidemic, China's stock market experienced a wave of short-term bull market in nearly four months from March 2020. The market value of China's A shares increased by nearly 30% in the four months. In this wave of short-term bull market, many fund managers performed well and brought huge returns to investors; at the same time, since December 2021, nearly four months later. China's stock market has experienced a wave of short-term bear market. The market value of China's stock market has dropped by 20%, and many funds have gone bankrupt. However, some fund managers have outstanding management ability, helping investors to keep their wealth. Whether it is the short-term bull market in March 2020 or the short-term bear market in December 2021, the market value of China's stock market has fluctuated by more than 20% in nearly four months, which has generated a large number of fund related data, which can help to explore the following questions:

a. In the case of rapid short-term rise in the market value, which fund managers' personal characteristics can help investors earn more wealth?

b. What fund managers' personal characteristics can help investors avoid more losses when the market value of the stock market drops rapidly in the short-term? In other words, in the short-term bull bear market, which funds managers' personal characteristics will have a significant impact on the performance of the fund.

In the literature analyzing the impact of fund managers' individual characteristics on fund performance, Xiujuan Zhao and Shouyang Wang [1] used the relevant data from 2004 to 2006 to analyze the impact of fund managers' securities working time, gender, education, overseas background and professional certificates on fund performance through the OLS method, and concluded that fund managers have long securities working experience and master's degree plays a positive role in fund returns, Having a doctor's degree plays a negative role, and gender does not play a significant role; Limei Chen [2] used the relevant data from August 31, 2005 to August 31, 2007 to analyze the impact of fund manager's working time, tenure, gender, education level, age, professional background and graduation school on fund performance through correlation analysis method and OLS method, and concluded that there is a strong correlation between fund manager's tenure and fund risk return rate, and the securities working years The conclusion that education affects the return rate of the fund by influencing the tenure; Ke Liu, Cunzhi Tian [3] ; Jing Yu [4] used the relevant data from 2005 to 2011 to analyze the impact of the fund manager's working time in securities, education level, overseas background, professional certificate, graduation school and MBA education background on the fund through the OLS method, and concluded that the fund manager's working time in securities plays a positive role in the fund's return rate, and the gender impact is not significant; Xu Wu and Lin Xu [5] used the relevant data from 2014 to 2005 to analyze the impact of fund manager's working time, tenure, gender, education level, professional background, graduation school, professional certificate, MBA education background and number of managed funds on fund performance through OLS method, and concluded that fund manager's doctoral degree has a significant impact on fund yield, but master's degree, tenure The conclusion that the working years of securities have no significant impact on the yield.

Some scholars began to study the impact of fund managers' personal characteristics on fund performance in two different market environments: a bull market and bear market. Ping Shu [6] took the first half of 2005 as the bull market period and the second half as the bear market period. He analyzed the fund managers' securities working time, tenure, gender, education level, professional certificate, age, MBA education background, number of funds managed The influence of industrial work experience and fund manager's experience on fund performance leads to the conclusion that during the bull market period, the working time of fund managers in securities and the working time of fund managers play a negative role in fund returns, while the working time of fund managers with high education and men play a positive role in fund returns. During the bear market period, the influence of gender on fund returns becomes insignificant, However, the influence of fund manager's time on fund returns has changed from negative to positive; Yanyang Yan and Kai Deng [7], In the bear market period, men play a positive role in fund returns, while the role of master's degree becomes insignificant. In addition, the time spent as a fund manager played a positive role in both periods.

From the above literature collation process, it is found that most articles use OLS model, and the model repeatability is high; In addition, there is less literature on the impact of fund managers' personal characteristics on fund performance in bull market and bear market, and the data used in the existing literature is relatively old, both before 2016; In this paper, the data of 2020 and 2022 are used, and the single factor ANOVA model is used; At the same time, in the bull market period and bear market period, we respectively studied the impact of fund managers' personal characteristics on fund performance. Therefore, this paper makes up for the shortcomings of the existing literature.

2. Data selection

2.1 Division of short-term bull market and short-term bear market

Coronavirus pandemic situation and the turbulence of domestic and foreign relations have brought great volatility to the Chinese stock market from 2020 to 2022, showing a trend of rapid rise and rapid decline, but also provided the latest data to study the relationship between fund managers and fund performance. In the middle and late March 2020, the coronavirus pandemic situation in Wuhan was

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controlled, and the Chinese stock market began to rise rapidly from the middle and late March to the late July, with a rise rate of nearly 30%, This is a short bull market lasting for nearly four months, so this paper chooses March 19, 2020 as the starting point of the short bull market and July 20, 2020 as the ending date of the short bull market; Since 2022, the global monetary policy tends to tighten, and conflicts between countries continue. CSI 300 Index has been falling all the way, falling by nearly 20% in four months. This is a short bear market of nearly four months. Therefore, December 27, 2021 is selected as the starting date of the short-term bear market and April 27, 2022 as the ending date of the short-term bear market. The results of division are shown in Table 1.

Table 1: Division of short-term bull market and bear market.

Date	Bull or Bear Market Division
March 19, 2020	Starting date of short-term Bull market
July 20, 2020	Ending date of short-term Bull market
December 27, 2021	Starting date of short-term Bear market
April 27, 2022	Ending date of short-term Bear market

2.2 Data Selection

3. Empirical results

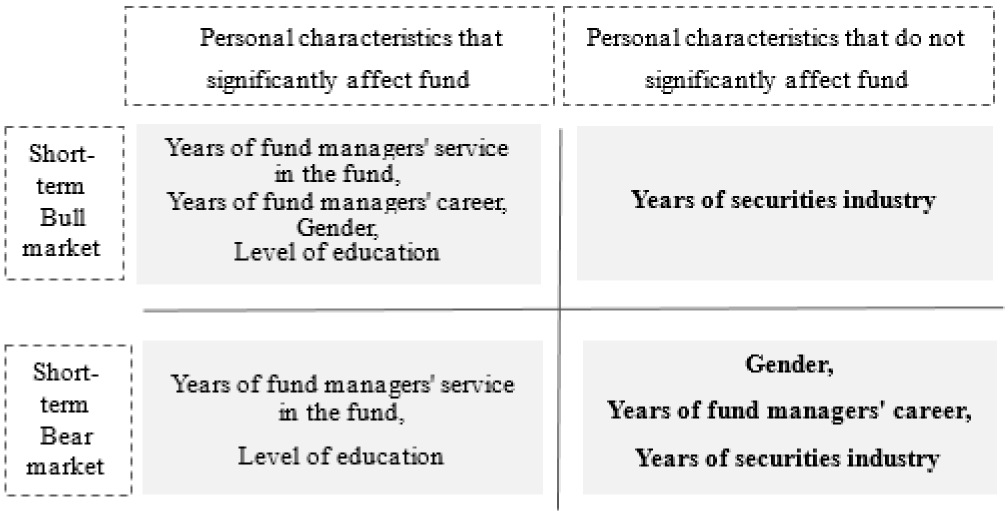

Figure 1: Five personal characteristics of the fund managers and the return rate.

Sample selected the common stock funds in the Chinese stock market that experienced the bull market and the bear market. The reason for removing the passive management funds is that it is more conducive to measuring the performance of fund managers under active management during the bull bear market. All fund sample data are from *Juyuan* Fund database.

Return rate of the fund during the bull market and the bear market is calculated from the net value of the fund, and the bull market return rate and bear market return rate are obtained, in which the net value of the fund has been restored. The five personal characteristics of fund managers, namely, years of securities industry, years of fund managers' service in the fund, years of fund managers' career, gender, and level of education, are extracted as variables X; Among them, the gender is divided into two categories: male and female, and level of education is divided into three categories: undergraduate, master, and doctor. Years of securities industry, years of fund managers' service in the fund, and years of fund managers' career are divided into two categories according to their median. At the same time, the funds that changed fund managers during the bull bear market were eliminated, so that the impact of fund manager change on fund returns could be removed, and 532 sample data were finally screened.

ANOVA is used to determine whether there is a significant difference between the mean values of two or more samples, and this paper explores whether different personal characteristics of fund managers have a significant impact on fund performance, which is applicable to the single factor ANOVA model. Divide the sample into different groups according to the personal characteristics of fund managers, and use variance analysis to judge whether there is a significant difference in the average bull market return between different groups. If there is a significant difference, we think that the personal characteristics have a significant impact on fund performance in the bull market; we also use ANOVA to judge whether there is a significant difference in the mean value of bear market returns between different groups. If there is a significant difference, we believe that this personal characteristic has a significant impact on fund performance in the bear market.

Through the net value of the fund, we calculated the return rate of the short-term bull markets common equity fund and the short-term bear market common equity fund. We made a single factor ANOVA between the five personal characteristics of fund managers and the return rate of the bull bear market. The results are shown in Figure 1.

From the above figure, we can see that the characteristics of years of securities industry have a significant impact on fund performance in the bull market. The characteristics of gender, years of fund managers' career and years of securities industry significantly affects fund performance in the bear market. The results of ANOVA are shown in Table 2-6.

3.1 Gender-Single factor ANOVA:

Results of gender variance analysis are shown in Table 2.

Table 2: Results of gender variance analysis.

Quantitative variable Y	Rated variable X	F	P
Bull market yield	Gender	2.83	0.0930
Bear market yield	Gender	5.01	0.0254

The results showed that the P value of bear market gender variance analysis was about 0.0255<0.05; this shows that gender has a significant impact on bear market returns. Descriptive statistics show that the average yield of funds with male fund managers in bear markets is about -24.23%, and the average yield of funds with female fund managers in bear markets is -22.58%. The results show that the losses of funds with female fund managers in bear markets are smaller than those of male, with significant differences. Compared with male fund managers, female fund managers avoid being aggressive and have a steady style when investing, which leads to significant difference.

3.2 Years of fund managers' service in the fund-Single factor ANOVA:

Results of years of fund managers' service in the fund variance analysis are shown in Table 3.

Table 3: Results of years of fund managers' service in the fund variance analysis.

Quantitative variable Y	Rated variable X	F	P
Bull market yield	Years of fund managers' service in the fund	0.45	0.5037
Bear market yield	Years of fund managers' service in the fund	3.50	0.0617

The results show that years of fund managers' service in the fund has no significant impact on bull market returns and bear market returns, indicating that no matter how long a fund manager has served in a fund, it does not significantly affect the return of the fund, which also provides a theoretical basis for fund managers to change funds frequently.

3.3 Years of securities industry-Single factor ANOVA:

Results of years of securities industry variance analysis are shown in Table 4.

Table 4: Results of years of securities industry variance analysis.

Quantitative variable Y	Rated variable X	F	P
Bull market yield	Years of securities industry	4.77	0.0295
Bear market yield	Years of securities industry	17.20	0.000039

The results show that the P value of bull market yield and years of securities industry variance analysis is about 0.0295<0.05; it shows that years of securities industry have a significant impact on the bull market yield. Descriptive statistics show that the average return rate of funds with a shorter working life in the bull market is about 40.16%, and the average return rate of funds with a longer working life in the bull market is 42.20%. The results show that the return of fund managers with a longer working life in securities is higher than that of fund managers with a shorter working life in the bull market.

What is more noteworthy is that the P value of bear market yield and years of securities industry

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variance analysis is about 0.000039, which is far less than 0.01; it shows that the years of securities industry has a strong and significant impact on short-term bear market returns. Descriptive statistics show that the average return rate of funds with a shorter years of securities industry in the short-term bear market is about -25.10%, and the average return rate of funds with a longer years of securities industry in the short-term bear market is about -22.73%, indicating that fund managers with a longer years of securities industry lose less than those with shorter years in the short-term bear market; Fund managers with long working years in securities industry have long working hours and rich experience, which makes them more capable of avoiding risks in short-term bear markets.

3.4 Years of fund managers' career-Single factor ANOVA:

Results of years of fund managers' career variance analysis are shown in Table 5.

Table 5: Results of years of fund managers' career variance analysis.

Quantitative variable Y	Rated variable X	F	P
Bull market yield	Years of fund managers' career	0.88	0.3471
Bear market yield	Years of fund managers' career	5.03	0.0253

The results show that the P value of bear market fund yield and years of fund managers' career variance analysis is about 0.0253<0.05; this shows that years of fund managers' career has a significant impact on bear market returns. However, descriptive statistics show that the average yield of funds with short years of fund managers' career in the bear market is about -24.56%, and the average yield of funds with long years of fund managers' career in the bear market is -23.26%. The results show that the loss of funds with long years of fund managers' career in the bear market is less than that of funds with short years of fund managers' career, and the difference is significant.

3.5 Level of education -Single factor ANOVA:

Results of level of education variance analysis are shown in Table 6.

Table 6: Results of level of education variance analysis.

Quantitative variable Y	Rated variable X	F	P
Bull market yield	Level of education	0.84	0.4309
Bear market yield	Level of education	0.52	0.5931

The results show that level of education has no significant impact on bull market yield and bear market yield, indicating that no matter the education level of fund managers has no significant impact on fund returns.

4. Conclusion and investment suggestions

In a short-term bear market, years of securities industry, years of fund managers' career and gender have a significant impact on the return rate of funds. The loss of fund with a longer number of years of fund managers' career in a bear market is less than shorter years. The loss of funds managed by female fund managers in a short-term bear market is less than that of funds managed by male fund managers, Among them, the years of securities industry have the most significant impact on the fund return rate in the short-term bear market, and the fund managers with longer working years have lower losses than shorter working years in the short-term bear market; In a short-term bull market, only the fund managers' years of securities industry has a significant impact on the return rate of funds. Fund managers with longer years of securities industry have higher returns than those with shorter.

During the short-term bear market, if the fund manager has been working in securities for a long time, has long years of fund managers' career, and is also a female, individual investors can buy the fund, which can help you avoid more losses during the short-term bear market. During the short-term bull market, if a fund manager has long years of securities industry, individual investors are recommended to buy the fund, which can help you accumulate more wealth.

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