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Original Paper

Empirical Research on the Impact of Open Fund Sheep Behavior on Stock Price Volatility

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Abstract

In the past, economic research took the "rational man hypothesis" as the premise, but in reality, this premise is difficult to hold. In a large number of financial practices, a large number of special phenomena that are inconsistent with standard financial theory have emerged. Behavioral finance is premised on the assumption of irrational people, and herd behavior is a relatively special irrational behavior. It refers to the behavior of investors who are influenced by other investors when the information environment is uncertain, imitate other people's decisions, or rely too much on public opinion without considering their own information. Sheep behavior is a related behavior involving multiple investment entities, which has a great impact on the stability and efficiency of the market, and is also closely related to the financial crisis. Therefore, herd behavior has attracted widespread attention from academia, investment and financial supervision.

The capital market started late. In 1990, the Shanghai Stock Exchange was established, marking the birth of China's stock market, the distribution of market investors have changed again and again, unchanged is that the behavior of investment subjects has a strong similarity, at the same time, fund market has persistent fluctuations.

Whether there is a causal connection, this paper will focus on the development of fund market, use LSV model and VAR test method to test and analyze the fund and stock trading data of Shanghai and Shenzhen from the first quarter of 2017 to the first quarter of 2022, and empirically study whether there is significant herd behavior in open-end funds. On this basis, the impact of stock investment herd behavior on stock price volatility is empirically studied.

Finally, according to the research conclusion, from the three aspects of investor investment rationality, the effectiveness of capital market and the optimization of market structure, suggestions on how to reduce the impact of the herd effect and the healthy and sustainable development in the future.

Keywords

Open-ended funds, Sheep behavior, Stock price fluctuation

1. Introduction

1.1 Research Background

In recent years, China's fund industry has developed rapidly, and there are many phenomena of following the trend of investment in the market, which has become a huge stumbling block in China's fund market. China's regulatory authorities and institutional investors pay more and more attention to the daily operation of open-end funds. Open-end fund, which can also be regarded as an institutional investor, is both rational and irrational, and "herd behavior" is one of them. At present, institutional investors still occupy the majority in many markets with high level of development. Therefore, analyze and grasp the investment behavior of institutional investors, especially the herd behavior, is very conducive to the stability of the financial market. Measuring the behavior of investors' herd behavior and evaluating its impact on market stability is an important indicator to evaluate the maturity of the market and its institutional investors. On the basis of the above understanding, coupled with the summary of the previous herd behavior research, the econometric research model is used to study whether the herd behavior exists significantly in China's open-end fund market, and on this basis, the influence of the herd behavior on the volatility of the stock price is empirically studied. The results show that in China's open fund market, the herd behavior is significant, and has a more obvious impact on the stock price fluctuations. At the end of the article, we provide corresponding opinions and suggestions for maintaining market stability and reducing fluctuations.

1.2 Research Meaning

From the theoretical perspective, this paper measures the scale and degree of "herd behavior" in the open-end fund industry, measures the "herd behavior" of open-end fund investors, and evaluates the actual impact on the trading behavior and the stock market price fluctuation. In addition, with the improvement of capital markets and the change of regulatory policies, this research provides theoretical support for future investment stability and trading policy formulation. In general, this article provides an empirical basis for the evaluation and supervision of open-end funds, as well as a reference for investors to identify the ability of investment managers and choose open-end funds with less risk.

On a practical perspective, other market investors (such as fund investors and retail investors) usually show high attention due to their more accurate and professional investment information and larger holdings and follow their trading decisions. This paper studies the impact of the "herd effect" of institutional investors on the capital market, and provides a reference for investors to choose diversified open-ended funds and evaluate the ability of investment managers. In short, the article provides advice on market participants to make their investment decisions about institutional investors 'behavior, thus helping them to better understand institutional investors' behavior and make more informed investment decisions.

2. Theoretical Basis and Literature Review

2.1 Theoretical Basis

2.1.1 Definition of Herd Behavior

Herding behavior refers to individuals taking behaviors similar to most people in order to avoid risk, to seek to have a sense of belonging, or to imitate others in uncertain or emergency situations. This behavior often leads to individuals abandoning independent thinking and decision-making, thus forming a similar "herd" effect. Herding behavior can occur in a variety of social and economic environments and may lead to negative consequences such as collective collapse and financial crises.

When individuals are faced with complex or uncertain situations, they look for other people's opinions, signals, and behavioral patterns to assist themselves in making decisions. This tendency may lead in some contexts to a group of people to act like a "sheep", following mainstream views and actions rather than independent thinking. Sheep behavior may occur in various situations, such as the stock market, real estate market, public opinion influence on social media, etc.

A characteristic feature of herd behavior is the existence of an asymmetry in information transmission. When some messages are amplified or distorted, this information may cause more people to get involved in the herd behavior. In addition, herd behavior may also be influenced by group psychology effects, such as group identity, stress, competition, and belonging.

Although herding behavior may have negative effects, it also has its positive effects. For example, herd reference may be a quick way to gain information and skills for those with little experience or knowledge. In some cases, herding behavior can also promote the formation of social cohesion and a spirit of cooperation.

2.1.2 The Type of "Herd Behavior"

(1) Rational herding behavior and irrational herding behavior

Rational herd behavior means that in a market, many investors take similar investment strategies or actions based on rational analysis and judgment. This investment behavior is usually based on the analysis and evaluation of the market and company fundamentals, as well as the trade-offs of risk and return. In this case, group behavior can reflect the overall information and expectations of the market, and contribute to price discovery and market effectiveness.

Irrational herd behavior is also common in stock markets, such as when market sentiment swings, some investors may tend to follow the market sentiment in similar investment strategies or actions. This behavior may lead to excessive buying or selling in the stock market, thus affecting stock prices and market stability. In addition, some investors may make similar investment decisions influenced by irrational factors such as rumors and speculation, which are usually unsustainable and risky.

(2) True herd behavior and false herd behavior

In the stock market, real herd behavior can mean that stock investors adopt similar investment strategies or actions influenced by market sentiment and other investor behaviors. For example, in an exciting rising market, many investors may follow the trend, causing more people to follow and buy

shares, pushing up the stock price.

False herd behavior in the stock market usually refers to some bad speculation, such as market manipulation, insider trading, etc. These behaviors may be a few people or institutions through false information, rumors and other means to manipulate the stock price, guide other investors to follow, and thus make profits. This behavior not only violates the market rules and laws, but also damages the market fairness and the interests of investors.

2.2 Literature Review

There are also three different views on whether herding behavior is prevalent in the entire fund market and whether herding behavior in the fund market has a substantial impact on stock price fluctuations

The first view is that herding behavior does have a substantial impact on stock price fluctuations, which is the mainstream view of the academic world.

Wang and Li took the data of 43 quarters from the first quarter of 2008 to the third quarter of 2018 as samples, and divided the samples into three stages according to the level of economic development: January 2008-December 2011, January 2012-June 2016, and July 2016-September 2018. Through LSV model and VAR model, the results show that the herd behavior of the fund is significant, and the degree of herd behavior is not reduced with the increase of the number of funds in our country, and the herd behavior directly affects the stock price fluctuations. Liu (2018) used the panel data regression method to analyze the herding effect index of LSV and media coverage factors, and came to the following conclusion: under the influence of public opinion, institutional investors will also have "herding behavior," which will have an impact on stock prices. Gao, Yang, and Ye (2017) found that as a result, the amount of institutional investors' holdings played a significant role in reducing stock price boom and crash.

The second view is that the open-end fund herd behavior will not have a bad impact on stock price fluctuations. Qin (2018) concluded through the combination of literature research, theoretical analysis and empirical analysis that institutional investors play the role of market stabilizer and can reduce the stock price fluctuations of GEM. In addition, compared with buying herd behavior, selling herd behavior contains more stock price information, which can better stabilize the stock price of GEM market. Du and Wang (2005) suggest that through empirical research, securities investment fund herd behavior has a positive effect on stock price fluctuations, and the positive effect is long-term, moderate herd behavior can accelerate the stock market for the new information understanding and feedback, makes the share price to reduce volatility, faster back to reflect the economic fundamentals. Zhou and Peng (2007) using the Shanghai index and the Shenzhen component index present specific yield as experimental sample analysis, the results show that when the institutional investors began to develop, the market yields appeared obvious volatility, but the stability of volatility increases, so that institutional investors can stabilize the stock market.

After saying the first two views, it is clear that the third view that the fund herd behavior and stock price fluctuations have no clear connection. Zhang, Jiang, and Ni (2021) based on no arbitrage

principle and options game method and the least square monte carlo method solution model, for the information is incomplete and asymmetric market, under the condition of the same information asymmetry, the information degree is not high, herd behavior can suppress stock price fluctuations, and when the information advantage prominent will enlarge share price fluctuations. Zhang, Li through research from 1999 to 2003 closed-end fund investment data, the results: closed-end foundation through positive feedback investment trading behavior, this behavior has strong influence, will bring more serious herd behavior to the market, and the emergence of these phenomena is unfavorable to the long-term stability of the stock market, however, the study also shows that in the securities investment fund market, sell sheep behavior can calm stock price fluctuations.

3. Industry Characteristics and Cause Analysis

3.1 Open-End Fund Meaning and Characteristics

3.1.1 Implication

Open-end fund (Open-end Funds), also known as mutual fund, refers to the fund sponsors in setting up fund, fund business unit or total size is not fixed, can according to the real-time investors, at any time to sell investors fund units or shares, and can redeem at the request of investors issued the fund units or shares of a fund operation mode. Investors can not only increase the fund assets and size of the fund through the seller's institutions, but also sell the fund shares to reduce the fund assets and size.

3.1.2 Characteristic

(1) Good liquidity: open-end funds can be bought and sold directly on the exchange, investors can buy or redeem shares at any time, very flexible.

(2) Asset allocation: open-end funds allocate assets according to the investment decisions of fund managers to diversify risks and diversify investment varieties.

(3) Transparency: open-end funds disclose their portfolios and net worth, and investors can learn about their holdings.

(4) Simple procedures: investors only need to buy fund shares to participate in the investment of the fund, do not need to carry out tedious investment management work.

(5) Risk control: Fund companies make use of their professional and information advantages to conduct risk control and investment management of funds, which can better protect the interests of investors and maximize the returns.

3.2 Open-Ended Funds Affect the Stock Market Volatility Reasons

China's open-end stock funds mainly in the secondary market to invest in the stocks of listed companies. As the number and size of such funds continue to grow, there is growing concern about their impact on the stock market. Research shows that the position change of star fund will affect the trading of other funds, and the same direction is high. This imitation behavior may lead to a large number of stocks in the same direction in the market, which has an important impact on the volatility of the stock market. Therefore, whether it is the same investment decision made based on reasonable

information analysis or a simple irrational imitation, the imitation behavior of China's open-end stock fund may have an impact on the volatility of the stock market.

In addition, China's financial market has developed for a short time, and compared with other developed economies, it still needs to be improved. Therefore, the information in the financial market is also incomplete, and there is a certain degree of information asymmetry. As a result, some investors may doubt some of the information that they have and even give up, and instead pay attention to and trust the information that other investors have. Some of the most watched messages will be the market leader, and more and more investors will believe them. Therefore, this "herd effect" will cause the stock price to deviate from its fundamental value, and the basic information of listed companies will affect the price accordingly, which means that more non-fundamental factors will have an impact on the stock price. As mentioned above, the herd effect includes not only buying behavior, but also selling behavior. As a result, investors may trade briefly, heavily and in the same direction, thus causing stock market turmoil, and thus causing a big disturbance to price volatility.

Finally, herd behavior is also divided into rational herd behavior and irrational herd behavior. When irrational herd behavior accumulates to a certain extent, bubble phenomenon will occur. For example, when the stock market rises, institutional investors remain optimistic about the market, which leads to mass buying in the market. According to the principle of supply and demand, it will lead to a further rise in the stock price, and will burst when the bubble accumulates to a certain extent, thus causing panic in the market, and a large number of investors will sell in the same direction, further aggravating the turbulence of the stock market.

4. Analysis of Herd Behavior Existence

4.1 Research Method

In order to test whether there is herd behavior in the open-end fund market, the LSV model studied by Lakonishok (1992) was selected as the measurement model of herd behavior indicators. The model measures the existence of herding behavior by measuring whether a securities investment fund has the same trading tendency for a stock as a whole. This model is selected for the following reasons: 1. Easy data for the LSV model.2. The measurement results of the LSV model are more accurate.3. It is widely used, and the research results are more comparable.

The model formula is：

$HMit=|P\ \ it-\mathrm{E}(P\ \ it)|$

Pit=Bit/(Bit+Sit)

In which：

$HMit$: Sheep behavior degree index, namely the herd behavior degree of stock i in period t.

$P\ \ it$: The number of funds buying a stock I in period t is a proportion of the total number of funds buying and selling the stock.

Bit：All funds bought stocks i during period t

Sit：Sales of all funds to stock i during period t

$E(P\ it)$：That is, the expected value of the $P\ it$

When the value of $HMit$ is 0, it indicates that there is no herd behavior for the stocks in the fund market within the period t. Conversely, when $HMit$ is not 0, there is herd behavior, and higher $HMit$ values indicate more significant herd behavior. However, this method can only test the existence of herd behavior, but can not explain the direction of herd behavior, so the herd behavior measure index needs to be corrected. Increase buying flock behavior BHMit and sell herd behavior SHMit by the following formula:

BHMit=|Bit-E(Bit)|

SHMit=|Sit-E(Sit)|

4.2 Data Selection

The data period selected in this paper is from the first quarter of 2017 to the first quarter of 2022. This range includes both the transformation of the bull and bear market and the impact of the impact of the epidemic on the stock market. Investors are not confident in their own information and are easier to study the herd effect.

The original data of this paper is obtained through Wind database and Oriental Wealth network, and the data of the top 10 stocks held by open-end equity funds are collated, and the number of stocks traded is reflected through the changes in the number of stocks. The specific operation is as follows: the author obtains the data of the top ten stocks of the open-end fund from the fund quarterly report, compares the distribution of stocks in each quarter with the last quarter, and judges the buying and selling behavior through the change of shareholding and the old and new stocks.

4.3 Herd behavior Measure Results

computational formula：

$$\mathrm{HM} = \frac{1}{N}\sum_{i=1}^{N} HMit$$

Through the above formulas, the herd behavior degree of each quarter is calculated

After calculation, the following measurement value of Chinese open fund sheep behavior (Shanghai and Shenzhen main board market)

Table 3-1 Table of the First Quarter of 2017 to the First Quarter of 2022

	HM	BHM	SHM
2017 Q1	0.3114	0.1182	0.2132
2017 Q2	0.2794	0.1376	0.1668
2017 Q3	0.2139	0.1065	0.1564
2017 Q4	0.1326	0.2278	0.1214
2018 Q1	0.3118	0.1562	0.2254

2018 Q2	0.2785	0.2761	0.2802
2018 Q3	0.1736	0.1869	0.162
2018 Q4	0.1125	0.1296	0.1178
2019 Q1	0.1885	0.2263	0.2546
2019 Q2	0.2602	0.2657	0.2319
2019 Q3	0.1235	0.1024	0.1398
2019 Q4	0.1468	0.0954	0.1383
2020 Q1	0.1542	0.2385	0.2432
2020 Q2	0.2143	0.2228	0.2065
2020 Q3	0.1564	0.1486	0.1352
2020 Q4	0.1829	0.1951	0.1562
2021 Q1	0.1524	0.2101	0.1628
2021 Q2	0.1351	0.1132	0.1534
2021 Q3	0.1003	0.1094	0.1061
2021 Q4	0.1456	0.1227	0.1163
2022 Q1	0.2452	0.2058	0.1714

After measuring the herd behavior in the open-end fund market from the first quarter of 2017 to the first quarter of 2017 to the first quarter of 2022, it was found that there was obvious herd behavior in every quarter. Among them, the average overall herd behavior was 0.1914,0.1712, and the average selling herd behavior was 0.1742

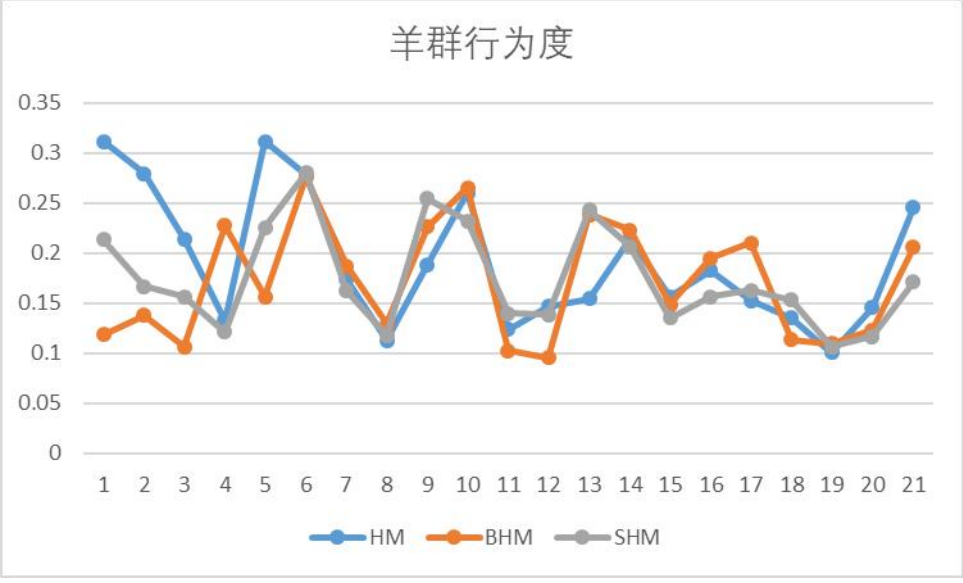

Figure 3-1 Plot of Herd Behavior from First Quarter of 2017 to First Quarter of 2022

Combined with the data in the chart and the table, it can be seen that the overall herd behavior of the open-end fund is more significant, among which the selling herd behavior is stronger.

5. Empirical Analysis of the Impact of Herd Behavior on Stock Price Volatility

5.1 Arrangement and Processing of the Data

This paper selects the first quarter of 2017 to 2022 data empirical analysis, due to the stock distribution from the stock market, the mainland main stock market for Shanghai and Shenzhen, so the selection of explanatory variables must give full consideration to this important factor, considering the market index, at the same time include Shanghai and Shenzhen stock market of csi 300 index has become the best reference index. This paper will select the quarterly standard deviation of the CSI 300 index to reflect the changes in stock prices.

Interpreted variable: standard deviation of CSI 300 index, recorded as STD, also as Y

Explanatory variable: Buy flock behavior degree, recorded as BHM, also as x1，Selling sheep behavior degree, recorded as SHM, also as x2

5.2 Empirical Analysis

5.2.1 Stability Test

In order to ensure the accuracy of the subsequent studies, the above data are required to be tested for smoothness. Comprehensive consideration, ADF method for stability test.

Table 4-1 Results of the ADF Test for the Variables

variable	ADF value	5% critical value	P value	Stabilization results
STD	-3.348578	-3.052169	0.0286	steady
BHM	-4.126525	-3.673616	0.0217	steady
SHM	-6.284474	-3.673616	0.0004	steady

As can be seen from the data above, the P-values of STD, BHM and SHM variables are all small, all below 0.05, i.e., stationary at the 5% significance level. Studies can therefore be continued.

5.2.2 To Develop the VAR Model

Since the data has passed the stationarity test, now we will use EViews9 to establish a VAR model for STD, BHM and SHM. The determination of the appropriate lag order p for the endogenous variable is one of the important conditions for establishing the VAR model. If the lag order is too small, the autocorrelation of the random disturbance term may be more serious, which will lead to the lack of validity of the parameter estimate; if the lag order is too large, more parameters will be estimated, and large estimation error will be generated under finite sample size. To retain more degrees of freedom and make the model fit more accurate, we chose to build a VAR model with a second-order lag, as shown in

Figure Figure 4 – 1

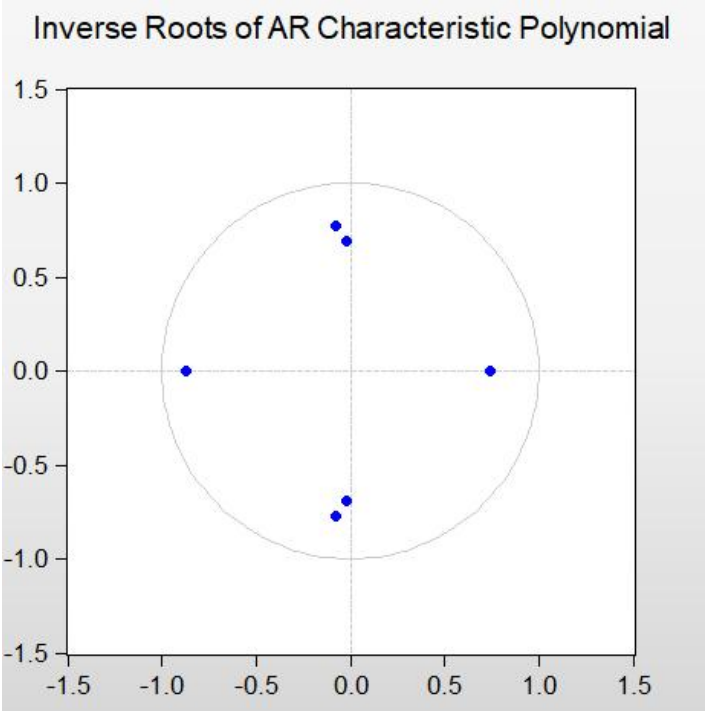

Figure 4-1 VAR Model Detection Plots in Figure

As can be seen from Figure Figure 4-1, all points fall within the unit circle and so this VAR model is stable.

5.2.3 Granger Causal Test

The data selected in this paper is the time series data, which may have a strong correlation, resulting in the abnormal statistical results of the detection, but in fact, they do not have a real correlation. For example, the herd behavior will affect the standard deviation of the CSI 300 index, while the standard deviation of the index will affect the investor psychology, thus affecting the herd behavior in the next stage. Therefore, the next Granger causality test will be conducted on the VAR model to further study whether the behavior of buying and selling sheep directly affects the fluctuation of the stock price.

Table 4-2 Results of the Granger Causality Test

Dependent variable: STD			
Excluded	Chi-sq	df	Prob.
BHM	5.651290	2	0.0593
SHM	15.44963	2	0.0004
ALL	17.02938	4	0.0019
Dependent variable: BHM			

Excluded	Chi-sq	df	Prob.
STD	6.628084	2	0.0364
SHM	13.62616	2	0.0011
ALL	18.33956	4	0.0011
Dependent variable: SHM			
Excluded	Chi-sq	df	Prob.
STD	6.344245	2	0.0419
BHM	2.881013	2	0.2368
ALL	6.960296	4	0.1380

From the test results, we can know that buying herd behavior at 10% significance level will have an impact on the stock price volatility, while selling herd behavior at 5% significance level will have an impact on the stock price volatility, and the stock price volatility will in turn affect the buying and selling herd behavior. Thus, the herd behavior will affect the stock price fluctuations.

5.2.4 Pulse Response Analysis

Because the VAR model reflects the dynamic relationship between variables, so when the VAR model (also known as new interest (innovation)), will inevitably affect the current and future value of all endogenous variables in the whole VAR system, the influence path and degree of mathematical method is called the pulse response function (impulse response function, IRF). Note that this is a shock (im-pulse) for random disturbance terms, but a feedback to the shock (response) for endogenous variables. The pulse response function is used to analyze the dynamic influence of the VAR model on the system.

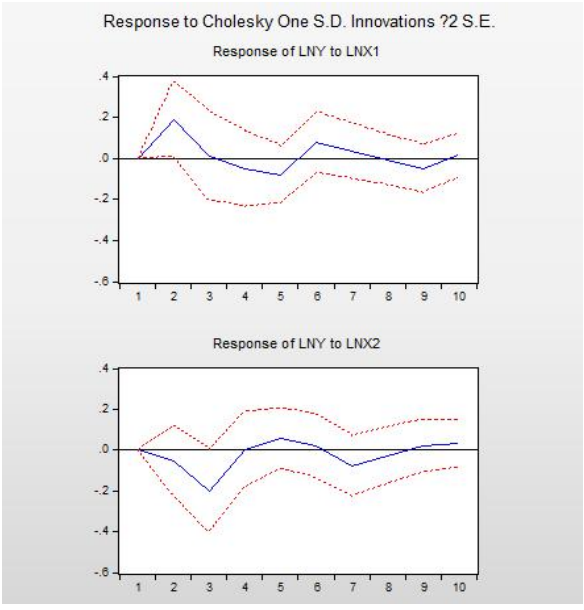

Figure 4-2 The Pulse Response Analysis Plot

According to Figure 4-2, when buying flocks produces a unit of positive impact, the stock market will produce a large fluctuation for a long time. When selling herd behavior has a positive impact, the volatility of the stock market is more obvious, which makes the stock market volatility more violent, and the volatility will stabilize after a period of time. As a result, both selling and buying behavior have a positive impact will have an impact on the volatility of stock prices.

5.2.5 Variance Decomposition

Through the analysis results of the pulse response function, we can find that both buying and selling the herd behavior will have an impact on the fluctuation of the market stock price. However, to draw more precise conclusions, we need to perform the variance decomposition of the VAR model in order to further observe the extent to which buying and selling herd behavior affects stock price volatility.

Table 4-3 The Variance Decomposition Results

Variance Decomposition of LNY				
Period	S.E.	LNY	LNX1	LNX2
1	0.365661	100.0000	0.000000	0.000000
2	0.436688	79.68436	18.95867	1.356966
3	0.484738	66.50697	15.43404	18.05899
4	0.491277	66.27862	16.13601	17.58538
5	0.531897	67.86545	15.96846	16.16609
6	0.537884	66.37330	17.70581	15.92089
7	0.545900	64.84607	17.61147	17.54246
8	0.550357	65.16486	17.34713	17.48800
9	0.556691	64.94393	17.79521	17.26086
10	0.558199	64.77678	17.76631	17.45690

According to the data in the Table, it can be observed that in the main board market reflected by the CSI 300 index, the effect of buying herd behavior and selling herd behavior of Chinese open-end stock funds is more and more significant with the passage of time. Among them, at the lag of 10 periods, the impact proportion of buying herd behavior has reached 17.8%, and the impact of selling herd behavior is as high as 17.5%. It can be seen that there is herd behavior in China's open fund market, which has an impact on the volatility of stock prices.

6. Conclusion and Suggestion

6.1 research Conclusion

This paper mainly studies the influence of the herd behavior of open-end funds and the unreasonable behavior of investors on the volatility of stock market. The linear regression model analyzes the

specific influence of herd behavior on Chinese stock market. The conclusion is as follows:

At present, there is still a large-scale herd behavior in China's open-end fund market. Quantifying herd behavior through stock trading volume, there is a mutual restriction relationship between herd behavior and stock market fluctuations. The herd behavior of investors will cause the fluctuation of stock prices, and the influx of more investors will aggravate the consequences. On the contrary, the fluctuation of stock price and the instability of the market will also disrupt investors' investment decisions to some extent, making investors unable to accurately grasp the relevant market information and produce herd behavior. Normally, moderate herd behavior has little impact on the fundamentals of the stock market and the entire economy. Instead, moderate price fluctuations can also invigorate the stock market and promote its development. However, for excessive herd behavior, considering the large investment subjects and strong transmission, it has a strong impact on the economy and the stock market, it will lead to the stock market shock, and even the financial crisis. In short, herd behavior affects the dynamics of the stock market to a large extent.

6.2 Policy Suggestion

6.2.1 Publicize Rational Thinking and Strengthen the Education of Market Participants

Open-end funds have been developing in China for a short time and attracted the attention of the market, so investors often bring the habit of stock investment to the fund investment, such as "chasing the rise and falling", "frequent trading" and relying on inside information. Although the fund is a more reliable investment way than the stock, we need to treat the unique investment way of the fund with a rational attitude, realize the difference between it and other financial products and stocks, and understand the different trading methods and risks. The fund's return will be proportional to the risk, because the higher the expected return, the higher the risk.

To open-end fund, investors can apply to buy and redeem funds at any time. However, irrational investment methods will make investors affected by short-term sentiment, thus frequent trading, limiting the liquidity of fund managers' normal trading, and further magnify market volatility. For the sake of profit, some fund companies exaggerate the market conditions, establish investors 'optimistic attitude towards the market, and narrow or cover up the possible risks in the transaction, which to some extent aggravates investors' blind optimism.

6.2.2 To Establish a More Effective Capital Market Investment Environment

(1) Improve the capital market system. At present, the system of the domestic capital market is still not perfect. For example, there is a division problem in the bond market, the Shanghai and Shenzhen stock exchanges have not been connected to some extent, and the registration and clearing institutions are also independent. In the long run, the Shanghai and Shenzhen stock exchanges should become market-oriented institutions, rather than the local offices of the CSRC. In addition, there are still some institutional problems to be solved at present. For example, if the over-the-counter market is too loose, the registration system may still have room for improvement, and the trading system of the New Third Board also needs to be further improved and improved.

(2) Reduce administrative intervention. The relevant functional departments of the state should carry out the deepening reform, minimize the administrative intervention in the operation of the capital market, and let the capital market truly operate independently. For example, in the aspect of listing, the reform of the registration system should be fully implemented to let the market play a leading role. After the listed companies, the regulatory authorities should not pay too much attention to the stock prices or stock indexes, but should pay more attention to whether the behavior of the listed companies is regulated, and whether the investors and intermediaries have illegal behaviors. Once problems are found, they should be strictly punished.

(3) Manage the listed companies according to law. Listed companies, as the strong subjects in the capital market, especially the stock market, should be subject to strict supervision. Regulators should urge the major shareholders of listed companies or brokerage investment banks to operate in accordance with market norms, and constantly improve and perfect relevant information disclosure and other matters, so as to be responsible to the public.

(4) Protecting the legitimate rights and interests of small and medium-sized investors. The relevant functional departments of the state should carry out institutional innovation, such as the inversion of the burden of proof or class action litigation, so that small and medium investors can not be violated by illegal acts. These measures will help to enhance the confidence of small and medium-sized investors and promote the stable development of the market.

6.2.3 We Will Optimize All Factors and Accelerate the Development of Open-End Funds

(1) Give overall consideration to the quality and speed of the development of open-end funds, accelerate the industrialization and scale of open-end funds, improve the efficiency of scale, narrow the gap between developed countries, and give full play to the role of the fund industry in the field of economic development. Therefore, we should improve the fund market system. Implement policies such as strengthening fund product innovation and broadening fund sales channels to encourage fund companies to increase diversified products to meet the needs of various investors; at the same time, the fund market trading mechanism should be improved, and a sound information disclosure and risk warning mechanism should be established to improve market transparency.

(2) Improve the innovation ability of open-end funds, improve the existing fund operation mechanism, and improve the operation efficiency. Product innovation: Fund companies can develop new fund products, Such as debt-to-equity swaps, money-market funds, REITs, To meet the different needs of investors, Improve the level of market diversification; Investment strategy innovation: Fund companies can, by introducing new investment strategies, Such as quantitative investment, diversification investment and other ways to improve the fund investment return rate and risk control level; Technological innovation: Fund companies can improve the efficiency and transparency of fund management by adopting new technologies such as artificial intelligence and blockchain, Realize the whole process of fund management automation and information; Channel innovation: With the rapid development of the mobile Internet, Fund companies can use new channels such as the Internet and

mobile terminals, And using marketing tools such as social media, To attract more young investors into the fund market.

(3) Regulatory agencies and organizations should formulate relevant policies, actively and effectively guide the psychology and expectations of fund investors, and strengthen the risk awareness education of investors. We will formulate more perfect regulatory systems and rules to refine the responsibilities and obligations of fund managers, fund custodians and other relevant market entities. Increase the supervision of fund companies, timely stop and punish illegal business behaviors, and promote the legal and steady development of the market; strengthen the supervision of information disclosure of fund companies, require fund companies to disclose relevant information and risk tips timely, accurately and comprehensively, guarantee investors' right to know and choose; improve the market supervision means, such as big data, artificial intelligence and other technologies, improve the supervision efficiency and accuracy, find the market risks in time, and intensify the crackdown against violations.

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