

Behavior Analysis of Real Estate Investors

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Abstract: In this paper, the concepts and development process of overconfidence theory and The herding effect theory in behavioral finance, as well as the research and application of these theory by domestic and foreign scholars are briefly introduced. In this paper, the theory are used as reference for analyzing the preference and decision-making of real estate investors in real estate investment behavior, as well as the their relationship with the investment behavior. It is shown that overconfidence and the Herding Effect make the investment of real estate investors have the phenomenon of collective irrationality, emotional, blindness and conformity, which brings great uncertainty to the real estate market.

1. Introduction

Because of the high value and value-added space of real estate, real estate investment has developed rapidly in quantity and complexity. However, as an investment product, real estate can easily become the object of speculation because of its own characteristics, but excessive speculation will inevitably bring risks to the financial system. However, the existing research on real estate investment and financial risk seldom analyses the investment behavior of micro-subjects. This is because the traditional financial theory is based on the Fama efficient market hypothesis. The obvious characteristic is that people in the market are completely rational and the market is efficient. All kinds of asset prices in the market already fully reflect the existing information. Trading between investors is random, and investors can only make long-term investment decisions without obtaining short-term excess profits. Specific to the real estate market, if today's real estate prices reflect all the information available, tomorrow's real estate prices must be unpredictable, namely, housing prices in the future cannot be predicted based on existing information. However, in the following decades, it was found that the model of traditional financial theory was inconsistent with the actual investment behavior of investors in the financial market, and its model and paradigm were confined to a completely rational analytical framework, which ignores the actual decision-making behavior of investors. In the process of development of the real estate market, there are many abnormal phenomena that traditional financial theory can not explain appear. In the process of reflecting on the traditional financial theory, behavioral finance theory has attracted much attention because of its good explanatory ability in market anomalies. This makes it possible to introduce Behavioural Finance into the real estate market. In this paper, using behavioral finance theory for reference, focusing on overconfidence and the Herding Effect, the preferences and decisions of the actors are analyzed, and accordingly, the behavior of investors in the real estate market is explained.

2. Overconfidence in Real Estate Investment

After long-term empirical observations, psychologists have found that people usually over trust their judgment, overestimate their chances of success, often attribute their success to their ability, but underestimate the role played by other external factors such as opportunity and luck. This cognitive bias is defined as overconfidence.

There are two manifestation forms of overconfidence: One is the illusion of knowledge, namely people tend to overestimate their knowledge level, ability and information acquisition ability. The other is self-attribution bias, which means that people usually attribute success to themselves and

push responsibility for failure to others. The former is called self-improvement bias, and the latter is called self-protection bias.

Domestic and foreign scholars use overconfidence theory to analyze the investment behavior of real estate investors. Li Shaojun (2009) gave a more comprehensive behavioral finance explanation for the subprime mortgage crisis. She believes that overconfidence and anchoring theory create subprime mortgage products and lay hidden dangers for the subprime mortgage crisis. Through Herding Effect, expectation theory, the scale of development of subprime mortgage products continue to expand, and the price collapse irrationally in the process of the crisis, which leads to the depression and collapse of financial markets. In crisis, interest groups and transmission chains are full of irrational behavior. She also pointed out the importance of restraining irrational behavior to reduce the impact and loss of crisis.[1]

Because of the existence of overconfidence, investors usually only focus on the information that can enhance their self-confidence, while they ignore the information that will damage their self-confidence, resulting in the lacking of a risk-spreading investment portfolio of investors and underestimating the potential disadvantages of a investment portfolio. At the same time, an overconfident investor overestimates the accuracy of his private information and neglects public information, which may lead to a sub-optimal investment decision, namely, irrational investment. (Daniel et al., 1998). Usually, investors will overtrade because of overconfidence (Odean, 1998; Statman et al., 2006; Griffin et al., 2007), resulting in too many transactions, high transaction costs, and poor performance (Odean, 1998; Barber and Odean, 2000, 2001).

In the real estate market, there is a certain degree of overconfidence in buyers, real estate developers, banks and other financial institutions. They tend to be more optimistic about the future. They believe that there will be a lot of room for housing price to grow in the future, so that they will join the wave of housing buying tide, which will inflate the volume of trading in the market. At the same time, real estate developers' judgments about the future make them occupy a lot of land, and banks grant loan to them wantonly, which accelerates the fluctuation of the price of real estate market.

The real estate market differs from the stock market in terms of liquidity, transparency and geographic heterogeneity. Although many studies have shown that there is a comprehensive relationship between real estate and stock returns (Ling and Naranjo, 1999; Okunev et al., 2000). High returns in 2000-2006 in the real estate market made Americans tend to buy more houses, and the speculative housing bubble gradually formed, which eventually led to the 2008 subprime crisis. For speculative bubbles in real estate, whether it is positive or negative, we must realize that investors' overconfidence plays a fundamental role.

Investors' overconfidence is not only reflected in the real estate market, but also in the stock and fund markets, while it is relatively mild in the futures markets of precious metals, bulk raw materials, energy and grain. When stock prices rise in line with individual investors' estimates of stock prices, it tends to lead to overconfidence among individual investors. Moreover, they believe that they accurately grasp the future trend of stock prices, and they are more inclined to buy behavior. This kind of intuitive judgment allows individual investors to focus on information that enhances their self-confidence when filtering various information, inducing more speculative behavior, and leading to a large number of irrational blind investments. Especially in China's stock trading, it is more common for the model of traditional financial theory to be inconsistent with the actual investment behavior of investors in financial market. On the one hand, those reflect the imperfection of China's stock market system, the incomplete disclosure of information by listed companies, the insufficient enforcement of regulatory system and the deviation of public opinion guidance. On the other hand, these also reflect that lots of individual investors (private investors) are confident that the so-called bull market will continue during their investment period, but will not reverse the transition of self-confidence when the stock market is in a temporary bull market stage, which can be known from the high turnover rate of the Chinese stock market.

Therefore, the overconfidence theory can be used not only to analyze the behavior of real estate investors, but also to analyze the behavior of stock investors.

3. Herding behavior and herding effect

Herding behavior refers to a social phenomenon which is often used to describe the irrational investment behavior of the individual when quoted into the financial field, and its performance is that investors follow the choices of most people to make decisions. Herd behavior is one of the important theories of behavioral finance. In the field of behavioral finance, herding behavior is defined as the irrational behavior of investors in the case of information asymmetry where they ignore personal information and choose to follow the decisions of the majority, causing abnormalities in financial markets.

Herding behavior is based on the fact that most individual investors are unable to process a large amount of information at the same time, and their attention to one thing may be at the expense of their attention to another, which is the limited attention of human beings. Limited attention will lead “information overlap” to people, namely, decision makers abandon their own collection and processing of information, and directly make their own judgments and decisions by observing other people's actions. It plays an important role in the formation of herding behavior, and it is also one of the most important factors that lead to herd behavior.

Herding behavior has the following characteristics: One is convergence. Convergence is the most fundamental feature of herding behavior. Investors take decisions to follow other investors, or if they find out that other people don't invest, they also decide not to invest, then the investor has a herding behavior. The second is instability. Herding behavior is influenced by a variety of factors, which shows a very unstable characteristic. The third is relativity. Herd behavior is not absolute, but relative[2].

The herding effect, also called as the principle of “simple copying,” is a crowd-following psychology. Sheep are not organized, but once the group moves, each sheep will run in the same direction. Herding effect occurs frequently in the capital market. Under the condition of people can observe the decision-making of the former actors, it is a common phenomenon in human society that people follow the decision-making of others and adopt the same way as their own decision-making behavior. In the environment of uncertain information, people's behavior is easily influenced by others, so they ignore their own information and adopt the strategy of following others blindly.

Many scholars at home and abroad have been involved in studying the emergence and development of herding effect theory, the analysis and application of herding effect, and its influence on the behavior of investors in the real estate market.

Gao Bo and Hong Tao (2007) conducted an empirical test on the herding effect of China's real estate market from 1999 to 2005. The results show that: In residential boom areas, there is a mutually reinforcing relationship between transaction volume growth and price rise, and there is a relatively significant expansionary herding behavior[3]. Shi Yongdong and Chen Riqing (2006) constructed a 0-1 decision model to explain the formation mechanism of the herd effect in the real estate market under the condition of information asymmetry, and explained how the herd behavior led to the real estate bubble at the same time. The results show that the behavior of residents in the real estate market is not only influenced by macroeconomic factors, but also influenced by behavioral psychology. The existence of herding behavior causes the real estate market to generate price bubbles[4]. Guo Yu (2015) believed that herding behavior was caused by incomplete or inaccurate information collected by the buyers, which prompted the buyers to follow and imitate the purchase behavior of others, thus forming the herding effect of “over cold” or “over hot” in the housing market.

Froot, Scharfstein, and Stein (1992) point out that in the case of ubiquitous short-term transactions, the transaction between people is likely to be based on information that are only focused on certain aspects, even under conditions of information that are not relevant to the underlying value. To a certain extent, it will lead to unreasonable allocation of information resources and obvious deviation between price and value, thus reducing market effectiveness. When many traders gather this information, herding effect will occur [6]. The externality of information proposed by Banerjee (1992) refers to the fact that when the subject of the behavior exists as an

individual in the group, more or less will reduce the believability of the information obtained by the subject. At this time, the subject will learn about the information of other individuals in the group through various channels passively or actively, and may take extreme actions, that is, to follow other people's decision-making unilaterally [7]. With the deepening of theoretical research, scholars gradually conduct empirical research on herding behavior. Roche (2000) built a real estate bubble model from the first quarter of 1976 to the first quarter of 1999 in Berlin. The empirical results show that the prevalence behavior of consumer has a great role in promoting real estate prices and it is likely to lead to speculative bubbles in real estate market [8]. Wong (2001) constructed a dynamic model of real estate bubble in Thailand. The results show that herding effect exists in the whole process of the formation and expansion of real estate bubble in Thailand [9]. Baddley (2005) constructed an econometric model based on the basic theory of herding behavior, and the results showed obvious herding behavior in the UK residential market [10].

In the information asymmetry real estate market, real estate developers, as suppliers of housing, have a large amount of information about housing prices and quality. However, ordinary housing buyers are in a weak position in the real estate market. They have limited access to real estate information and can not fully grasp the relevant information of the real estate market. Before buying, potential buyers usually obtain real estate information from other buyers or experts and scholars. Under the conditions of not knowing the real estate market, in the early period when real estate price is rising, buyers will not buy houses immediately, but will choose to wait and see. When they understand that other buyers have purchased houses, after being influenced by the media channels such as newspapers, the Internet, television and public opinion, which predicted the rise in house prices, potential buyers will have the mentality that "prices will continue to rise in the future and if they don't buy they will suffer loss", so they follow the group behavior and choose to buy the house immediately. The expansion of the herding behavior has led to an increase in the number of buyers of real estate market. As the supply cycle of the real estate market is relatively long, the supply of the real estate market remains basically unchanged in the short term, so real estate prices will be further pushed up. On the contrary, in the period when the real estate price is falling, if there is herd selling of real estate, the property market will continue to fall because of reduced demand and increased supply. It can be seen that the irrational psychological expectation of market participants is an important reason for the change of house prices. The process of making expectations on future housing prices based on existing information and making decisions is the investment sentiment.

Investor sentiment is the reaction of housing buyers to market conditions, and its changes will directly affect the purchase behavior of buyers. When many buyers have the same expectations of the market and follow the trend, market herding behavior will appear. Herding behavior will further lead to the rise or fall of house prices, which in turn will affect buyers' expectations of the market, leading to the aggravation of herding behavior in the market and forming a feedback circulation mechanism.

The phenomenon of herding effect is more obvious in China, because there are such cultural genes in Chinese culture. In the Eastern Han Dynasty of China, local officials were called "pastoralists", such as Jingzhou Pastoral. "Pastoral" refers to the manager who manage herds. This cultural influence of thousands of years in China, along with psychological interaction, makes the herd behavior of Chinese people more common, which will drive people to invest money in what most people think is the most profitable area without their own rational analysis, thus promoting irrational growth in prices in a certain area and thus creating a bubble. When it is destroyed, it will bring huge losses, cause huge fluctuations in the real estate market, and bring risks to the real estate and financial markets.

4. Conclusion

The overconfidence theory and herd effect belong to behavioral finance, which can explain the abnormal phenomena in real estate market more accurately and make an analysis about investment behavior of real estate investors that is consistent with the actual situation in the real estate

market. Investment behavior of Real Estate investors. Through the aspects above, It is shown that overconfidence and herding effect make the investment of real estate investors have the characteristic of collective irrationality, emotional, blindness and conformity, which brings great uncertainty to the real estate market. In the future, it is also a worthy direction to be explored that the overconfidence theory and herding effect theory are used to study and analyze the collective irrationality and the emotional behavior of investors in real estate market.

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