

Study on the Influence of Real Estate Investment Scale on Household Financial Asset Allocation

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Abstract: Compared with developed countries, the proportion of property income of Chinese households is extremely low. On the one hand, most households prefer saving and have a low degree of participation in risky financial assets. On the other hand, rising real estate prices gradually transform real estate from owner-occupied property to investment property, and residents are enthusiastic about buying real estate. Therefore, the impact of investment real estate on household financial asset allocation has become the focus of this paper. Using the data of "China Household Tracking Survey" of China Social Science Research Center, this paper adopts Probit and Tobit methods to investigate the impact of real estate investment on household financial asset allocation. It is found that the participation in housing investment and the amount of housing investment have extremely significant positive effects on the participation possibility and holding proportion of risky assets in household financial assets, which is conducive to releasing the vitality of financial markets.

Keywords: housing investment; risky financial assets; household financial asset allocation; probit; tobit

1. Introduction

Since the reform and opening up, the national economy has grown rapidly, and the income of residents has continued to increase. As of 2019, the per capita disposable income of permanent residents in urban areas in China was 30,733 yuan, an increase of 8.9% over the same period last year. At the same time, the financial market has also been continuously improved, and financial products have become increasingly abundant, becoming an important component of the fixed asset structure of urban residents that cannot be ignored.

At the same time, there are also issues that must be taken seriously. Compared with developed countries, the proportion of property income in domestic households is extremely low. In terms of financial asset allocation, most households prefer savings, and the participation of risky financial assets is still low. On the other hand, the real estate industry is hot, and residents are highly enthusiastic about buying real estate. According to the survey of the

Statistics Department of the People's Bank of China in 2019, the housing ownership rate of urban households in China exceeds 95%, and some households own multiple properties. The rising real estate prices and the gradual satisfaction of self-occupation needs have gradually transformed real estate from self-occupation attributes to investment attributes. This polarization situation has attracted people's attention. Does investing in real estate have an impact on household financial asset allocation? If so, is it promoting or suppressing?

In this regard, this article cuts in from a micro perspective, selects the data from the 2018 China Family Panel Studies (CFPS), creates probit and tobit models, and examines the impact of housing investment and total housing investment on the proportion of households participating in the financial market and holding risky financial assets. On the one hand, it can provide practical basis for the government to regulate housing prices, make the real estate market develop healthily, and promote the sustained growth of the national economy. On the other hand, it can also provide appropriate suggestions for households to optimize the allocation of financial assets, increase property income, and promote domestic demand.

2. Literature Review

According to traditional asset selection theory, households should invest a certain proportion of their assets in risky financial assets such as stocks. However, practical observations indicate that the proportion and degree of household participation in financial markets are much lower than theoretical data suggests, rendering traditional asset selection theories inapplicable and highlighting significant heterogeneity [1]. Zhang Jian and Liang Ling argue that the importance of family in Chinese culture makes household allocation of financial assets susceptible to various influences, exhibiting heterogeneous characteristics [2]. Nie et al. found that household asset allocation is not only influenced by objective factors such as economic and political environment, and the maturity of capital markets, but also by subjective factors and background factors [3]. Different household characteristics can affect the breadth and depth of household allocation of financial assets. Recent empirical research on household finance has

mainly focused on examining the impact of various factors on household allocation of financial assets and explaining the reasons for heterogeneity.

In terms of household demographic characteristics, Zhou et al. conducted empirical research through questionnaire surveys, which showed that with the increase of household head's age, the proportion of savings deposits held by households exhibits a "U" shape, i.e., it first decreases and then increases. In contrast, the proportion of risky assets held shows the opposite trend [4]. Domestic scholars believe that the gender and education level of household decision-makers have significant impacts on household allocation of financial assets [5,6]. Foreign scholars found through research that compared to women, men are more likely to hold risky financial assets such as stocks [7]. Wu et al. discovered that marital status and gender have notable effects on the effectiveness of household investment portfolios [8]. He and Rosen et al. validated through empirical research that households with higher self-rated health tend to hold riskier financial assets [9,10]. Regarding financial literacy, research by Yin, Wu, and others have shown that financial knowledge promotes household allocation of financial assets [11,12]. Zhou Hong utilized propensity score matching (PSM) and found that households without financial education are significantly less likely to invest in risky financial assets than those with adequate financial education [13]. In terms of household asset characteristics, some studies suggest that an increase in household assets and income has a catalytic effect on household participation in financial markets [14]. Wu Yuanyuan and Li Jing adopted a cross-sectional threshold regression model to analyze in detail the differences in regional and scale choices of household finance influenced by household wealth [15]. In terms of subjective factors, research by Zang Rihong and Wang Yu discovered that an improvement in social trust levels significantly boosts the probability of urban households holding risky financial assets and the ratio of risky financial assets in household portfolios [16]. The attitude towards risk affects the diversification of household financial portfolios, a viewpoint shared by scholars both domestically and internationally [17,18]. In terms of macroeconomic factors, Lv found that differences in regional financial development levels have a certain impact on household investment behaviors [19]. Gan Xiaoli through empirical analysis discovered that the microfinancial environment significantly promotes the ratio of risky financial assets to total financial assets in households' participation in risky financial markets [20]. Friend and Blume pointed out that relative risk aversion is a decreasing function of wealth. As the scale of wealth continues to increase, households tend to invest in risky financial assets [21]. On the other hand, real estate may have a crowding-out effect, where purchasing real estate can cause a liquidity constraint on household funds, thereby reducing the possibility and proportion of households investing in risky assets. At the same time, the risks inherent in real estate as a commodity, coupled with fixed monthly mortgage payments, can also decrease

the likelihood of households holding risky assets. Overall, most foreign studies suggest that housing investments reduce the share of equity assets such as stocks and funds in total financial assets [22]. Domestic empirical research on this topic is limited by data availability, has a late start, and is not yet mature. Some studies suggest that domestic real estate has a wealth effect, and the degree of this wealth effect varies based on regional and age differences [23]. Chen Yongwei et al through empirical analysis, argue that due to the rapid rise in domestic property prices, unlike western developed countries where the crowding-out effect is dominant, the wealth effect of domestic property dominates [24]. Shi believes that while holding real estate increases the likelihood of households holding risky assets, an increase in the proportion of real estate assets reduces the proportion of risky financial assets [25]. Chen Xunbo et al. argue that real estate not only has a wealth effect, but the wealth effect of real estate used for investment is greater than that of owner-occupied housing [26]. Of course, some domestic scholars believe that real estate does not have a wealth effect but rather has a "crowding-out effect". Li Tao et al. believe that real estate does not have a wealth effect and will not expand household consumption [27]. Yu Qing and He Guangwen based on 2013 China Household Finance Survey (CHFS) data, argue that housing assets not only have a crowding-out effect but also exhibit heterogeneity based on regional and wealth levels [28]. Additionally, some scholars believe that the overall effect of real estate should be discussed on a case-by-case basis. Shen Tao et al found that when households hold one property, it can squeeze investment in risky assets [29]. When households hold multiple properties, the wealth effect of real estate dominates. Other studies have shown that if households purchase homes in full payment, they are more likely to participate in financial markets and hold a higher proportion of risky assets, but this is not statistically significant overall [30].

3. Variable Selection and Model Setting

The data used in this article are from the 2018 China Family Panel Studies (CFPS) individual self-response questionnaire and household economic questionnaire, covering 32 provincial administrative units and a total of 14,241 households. For the research objective of exploring households that already own one suite of housing, the author screened and processed the data. During the screening process, only samples with public housing allocated by the unit or full property rights of family members were retained, and invalid data and extreme values were removed, resulting in a panel data containing 7,097 household samples.

Next, we explain the terms and variables involved in this article (Table 1). First is the risk financial asset, which includes financial products such as funds, stocks, and bonds, while the risk-free asset refers to cash deposits. Financial assets are the sum of risk-free assets and risk assets. The focus of this article is the impact of housing investment on household financial asset allocation, which is discussed from two levels: first, the participation of

risk assets, that is, whether households are involved in the financial market; second, the degree of participation of risk assets, that is, the proportion of risk assets in financial assets.

In addition, the amount of housing investment is the core explanatory variable in this study. The author considers the purchase of a house as a self-occupation demand, while the purchase of a second or multiple houses is considered as an investment behavior. Therefore, the amount of housing investment is set to the amount of property purchased other than a house. Since the CFPS data does not directly provide relevant information, the author uses the market value of the property as a proxy indicator. Another key explanatory variable is whether the household has additional property. If the household has additional property, the value is assigned as 1, otherwise the value is assigned as 0.

Table 1. Variables meaning

| Variable Name | Meaning | Assignment Description |
|------------------|-------------------------------------|--|
| Finmarket | Participation in Financial Markets | Assign 1 if participates in financial markets, 0 if not |
| Rate | Proportion of Risky Assets | The proportion of risky assets to total household assets |
| additional house | Ownership of Second Home | Assign 1 if owns a second home, 0 if not |
| House price | Amount of Investment in Real Estate | Assign actual value from database, unit in millions of yuan |
| Ifurban | Urban Residency Status | Assign 1 if urban resident, 0 if not |
| Gender | Gender | Assign 1 if male, 0 if female |
| Ifmarried | Marital Status | Assign 1 if married, 0 if unmarried or divorced |
| Age | Age | Assign actual age from database |
| Age ² | Age Squared | Age × Age, to examine life cycle phenomena |
| Educa | Education Background | Assign values based on highest level of education received: 1 for no formal education, 2 for nine-year compulsory education, 3 for high school, technical school or vocational school, 4 for higher education, 5 for master's degree or above. |
| Risk preferences | Risk Appetite | Assign values from 1 to 5 based on the level of risk aversion, with 1 being the lowest and 5 being the highest |
| Fincome | Household Net Income | Assign actual value from database and take its logarithm |

Risk Preference: As there is no direct data available in the 2018 CFPS, this article selects five questions to reflect the risk level of household heads, Choosing to flip a coin with a 50% chance of getting 200 yuan and a 50% chance of getting nothing, Choosing not to flip the coin and receiving a reward of 150 yuan, If agreed, the reward decreases successively to 120 yuan, 100 yuan, 80 yuan, and 50 yuan until the question of willingness to flip the coin is exhausted;

A reward of 50 yuan also satisfies the condition of not flipping the coin, which is set as 1, reward of 150 yuan or more is set as 5.

East: Drawing from the experience of dividing regions by the China Household Finance Center, including Liaoning, Hebei, Beijing, Tianjin, Shandong, Jiangsu, Shanghai, Zhejiang, Fujian, Guangdong, and Hainan.

Mid: Including Heilongjiang, Jilin, Hunan, Hubei, Anhui, Henan, Jiangxi, and Shanxi.

West: Including Chongqing, Sichuan, Yunnan, Guizhou, Tibet, Shaanxi, Gansu, Qinghai, Xinjiang, Ningxia, Inner Mongolia, and Guangxi.

Other Variables: Besides the aforementioned variables, this article also takes into account other factors that could potentially impact household financial asset allocation, including household annual income, age, gender, marital status, education level, and urban/rural household registration.

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4.1 Descriptive statistics

Table 2. Descriptive statistics of variables

| Variable | Size | Mean | S.d | Min | Max |
|-----------|------|--------|-------|-----|-------|
| Finmarket | 7097 | 0.0690 | 0.253 | 0 | 1 |
| Rate | 7097 | 0.0270 | 0.121 | 0 | 0.999 |
| ewfc | 7097 | 0.194 | 0.396 | 0 | 1 |
| fczj | 7097 | 18.30 | 86.58 | 0 | 2600 |
| urban18 | 7097 | 0.511 | 0.500 | 0 | 1 |
| gender | 7097 | 0.542 | 0.498 | 0 | 1 |
| hy | 7097 | 0.881 | 0.324 | 0 | 1 |
| age | 7097 | 50.64 | 13.95 | 20 | 93 |
| J | 7097 | 2759 | 1437 | 400 | 8649 |
| xl | 7097 | 2.221 | 0.908 | 1 | 5 |
| fxph | 7097 | 2.032 | 1.473 | 1 | 5 |
| fincome1 | 7097 | 9.37 | 21.87 | 0 | 915.9 |

Table 2 presents the descriptive statistics for all variables in this paper. Based on Table 2, we can observe the personal and household characteristics of the sample household heads. The average age of the sample household heads is 51 years old, with a minimum age of 20 and a maximum age of 93. Among them, 51.1% are urban households, while 48.9% are rural households. In terms of gender, 54.2% of the household heads are male, and 45.8% are female. Additionally, 88.1% of the household heads are married. Regarding their educational background, the heads of the surveyed households have completed nine years of compulsory education. In terms of risk preference, the sample household heads exhibit a slightly conservative attitude and tend to avoid risks. The average annual income of the sample households is 93,710 yuan, with the highest income reaching 9,159,000 yuan, while some households have an annual income of 0, indicating a lack of stable income sources.

When it comes to the allocation of financial assets among the sample households, only 6.9% of them have entered the financial market and hold risk assets, while 93.1% do not hold risk assets. The average amount of risky financial assets held by households is approximately

11,554 yuan, and the average amount of cash savings is around 76,642 yuan. However, some households have cash savings of only 3 yuan, which is nearly zero, indicating extremely low risk resistance capabilities. The proportion of risky financial assets held is only about 2.7%. This reveals that the majority of households in China, which own their own homes, do not hold risky financial assets, reflecting the "limited participation puzzle". Moreover, the holding proportion of risky financial assets is extremely low, with risk-free assets dominating the scene. In terms of real estate investments, the sample information shows that 19.4% of the surveyed households own additional properties, and the average amount invested in real estate among these households is 183,000 yuan.

When viewed from a regional perspective, households in the eastern region have the highest participation rate in risky financial asset investments, at 10.9%, and hold the most assets on average, amounting to 19,805 yuan. Households in the central region follow closely behind, while households in the western region have the lowest participation rate in venture capital investments, at only 2.9%, and hold an average of only 3,425 yuan in assets. Due to the highest number of household samples in the eastern region, which amounts to 3,022, it increases the average participation rate and asset holding scale of risky assets among households. Consequently, both the central and western regions have participation rates and total asset holdings below the average level.

4.2 Empirical Analysis

As shown in Table 3 and Table 4, from an overall perspective, the scale of real estate investment, which refers to the amount of housing investment, is positively correlated with the likelihood of households participating in risky financial asset investments and the proportion of holdings. Specifically, for every additional one million yuan in housing investment, the average likelihood of households participating in risky financial asset investments increases by 1.2 percentage points, and the average proportion of risky asset holdings rises by 1.1 percentage points. Compared to the average risky asset participation rate of 6.9% and the average holding rate of 2.7%, the factor of real estate investment scale cannot be ignored.

When examined by regions, the amount of housing investment in eastern, central, and western households has a significant positive effect on the participation and holding ratios of risky assets. However, the degree of influence varies. Notably, western households exhibit the greatest marginal effect, with values of 2.3% and 1.6% respectively, while eastern households have the lowest marginal effect, with values of 1.3% and 0.8% respectively. This difference may be attributed to the relatively lower real estate prices in the western region compared to the eastern region. With the same investment amount, western households can purchase a greater number of properties. Consequently, considering diversification in asset allocation, they tend to enter financial markets and hold risky assets more often.

Table 3 Impact of real estate investment scale on household participation in financial markets

| variable | Nation | East | Mid | West |
|-----------|-----------|-----------|-----------|----------|
| fczj | 0.012*** | 0.014*** | 0.023*** | 0.023*** |
| urban18 | 0.055*** | 0.075*** | 0.052*** | 0.015* |
| gender | -0.010* | -0.010 | 0.002 | -0.017** |
| age | 0.008*** | 0.010*** | 0.009*** | 0.002 |
| J | -0.000*** | -0.000*** | -0.000*** | -0.000 |
| xl | 0.039*** | 0.044*** | 0.044*** | 0.027*** |
| hy | -0.041*** | -0.053*** | -0.045*** | -0.011 |
| fxph | 0.004** | 0.011*** | -0.002 | -0.000 |
| lnincome1 | 0.037*** | 0.052*** | 0.025*** | 0.013*** |

Table 4. Influence of real estate investment scale on the proportion of households holding risky assets

| variable | Nation | East | Mid | West |
|-----------|-----------|-----------|-----------|----------|
| ewfc | 0.029*** | 0.034*** | 0.021** | 0.026*** |
| urban18 | 0.058*** | 0.078*** | 0.053*** | 0.015* |
| gender | -0.010* | -0.009 | 0.002 | -0.019** |
| age | 0.007*** | 0.010*** | 0.008*** | 0.002 |
| J | -0.000*** | -0.000*** | -0.000*** | -0.000 |
| xl | 0.040*** | 0.045*** | 0.045*** | 0.028*** |
| hy | -0.042*** | -0.054*** | -0.045*** | -0.013 |
| fxph | 0.004** | 0.011*** | -0.003 | 0.000 |
| lnincome1 | 0.039*** | 0.055*** | 0.027*** | 0.012** |

On one hand, in the domestic environment of constantly rising housing prices and inflation, real estate is considered a positive asset and a symbol of wealth. Purchasing real estate is the primary means for residents to maintain and increase their value. As there is no property tax on real estate and its value continues to appreciate, it has always been a seller's market, making it relatively easy for residents to convert their assets into cash. For households that own additional properties beyond their primary residence, it means they can easily liquidate without compromising their quality of life. Consequently, families with extra properties exhibit a decreased precautionary motive and increased speculative motive for money demand, making them less concerned about the risks in the financial market and more focused on the returns of financial products. This gives them more confidence and willingness to enter the financial market and purchase financial products.

On the other hand, despite the expectation of rising housing prices, rational households would not put all their eggs in one basket. With the psychology of preparedness, as the amount of investment in housing increases, families are bound to moderately increase their investments in other assets. Due to the history of inflation in China, most households have an expectation of future currency depreciation, and the low savings interest rate will inevitably lead them to switch to other more profitable financial products. Hence, it will increase the likelihood of entering the financial market and holding financial products, as well as the ratio of holding risky assets.

In addition, most importantly, according to the empirical analysis results presented in this article, the wealth effect of real estate is greater than the crowding-out effect. The continuous rise in real estate prices causes the explicit household wealth of families with multiple

properties and high housing investment amounts to rapidly increase, greatly enhancing their ability to withstand risks. Their risk appetite level will also rise compared to before. As a result, they are more willing to enter the financial market and purchase financial products, as well as hold more risky assets, compared to the difficulties in preserving and increasing the value of savings.

4.3 Robustness Test

This paper first conducted an empirical analysis on the allocation of financial assets using the presence of additional properties as the key variable through the Probit and Tobit models. The results showed that owning additional properties promotes the likelihood and proportion of investing in risky assets. After replacing the variables, the housing investment amount was used as the key variable, and the regression results indicated that the housing investment amount also optimizes the allocation of financial assets. This demonstrates the significance of the findings in this paper.

Furthermore, subgroup regressions were conducted on samples from the eastern, central, and western regions, and the results remained significant, which served as a robustness test to some extent. However, to ensure a more rigorous approach in this paper, a formal robustness test will be conducted.

Generally, there are three methods used for robustness testing based on previous experience. In this paper, we adopted one of these methods: using other similar variables as replacements. Specifically, we employed the number of additional properties as a new variable for empirical analysis. The following presents the results of this empirical analysis.

From the data presented in Table 5 and Table 6, it is evident that the number of additional properties owned has a significant positive impact on both the likelihood of investing in risky assets and the holding ratio of these assets. This observation is entirely consistent with the findings of the previous empirical analysis. While there are slight differences in terms of significance levels and coefficients, these do not alter the overall trend and direction of the results.

Taking these points into consideration, we can conclude that the empirical results presented in this paper exhibit a high degree of robustness.

Table 5. Impact of real estate investment scale on household participation in financial markets

| Variable | Nation | East | Mid | West |
|--------------|-----------|-----------|-----------|----------|
| amount | 0.019*** | 0.020*** | 0.015** | 0.020*** |
| urban18 | 0.057*** | 0.078*** | 0.053*** | 0.015* |
| gender | -0.011* | -0.010 | 0.002 | -0.018** |
| age | 0.008*** | 0.010*** | 0.009*** | 0.003 |
| J | -0.000*** | -0.000*** | 0.00*** | -0.000 |
| xl | 0.040*** | 0.045*** | 0.045*** | 0.028*** |
| hy | -0.042*** | -0.053*** | -0.045*** | -0.012 |
| fxph | 0.004** | 0.011*** | -0.002 | -0.000 |
| Infincome1 | 0.038*** | 0.054*** | 0.026*** | 0.012** |
| Observations | 7,097 | 3,022 | 2,143 | 1,932 |

Table 6. Influence of real estate investment scale on the proportion of households holding risky assets

| Variable | Nation | East | Mid | West |
|--------------|-----------|-----------|-----------|----------|
| amount | 0.011*** | 0.010*** | 0.009*** | 0.011*** |
| urban18 | 0.011*** | 0.015*** | 0.008*** | 0.004* |
| gender | -0.003* | -0.003 | -0.002 | -0.003 |
| age | 0.002*** | 0.003*** | 0.002*** | 0.000 |
| J | -0.000*** | -0.000*** | -0.000*** | -0.000 |
| xl | 0.014*** | 0.017*** | 0.016*** | 0.007*** |
| hy | -0.014*** | -0.020*** | -0.016*** | -0.003 |
| fxph | 0.001* | 0.003** | -0.000 | -0.000 |
| Infincome1 | 0.007*** | 0.011*** | 0.003** | 0.002** |
| Observations | 7,097 | 3,022 | 2,143 | 1,932 |

5. Conclusion

Based on the 2018 CFPS survey data, this paper employs Probit and Tobit models to examine the impact of housing investment on household financial asset allocation. The study is divided into three sub-samples of eastern, western, and central regions to explore the regional variations in this impact. The main conclusions are as follows:

Firstly, from a holistic perspective, property investment possesses a "wealth effect" and dominates. Whether it is the participation in housing investment, the amount invested in housing, or the quantity of housing investments, engaging in housing investment significantly increases the likelihood of households participating in risky asset investments and the holding ratio of risky assets. Furthermore, the number of property investments used in the robustness tests still exhibits a notable positive influence on households' holdings of financial assets.

Secondly, when discussing regional differences, both the ownership of additional properties and the amount invested in housing have a significant positive effect on household risk asset allocation in the eastern, western, and central regions. The positive effect of housing investment participation by eastern households on promoting the purchase of financial products in the market is greater, followed by western households and then central households. The amount of housing investment by western households has the strongest effect on promoting the optimal allocation of household financial assets, followed by the central and then eastern households.

Through the data presented earlier, it can be observed that there are currently some issues in Chinese households' choices between real estate and financial assets: From a macro perspective, there is a significant gap in household income and wealth, which has been further widened by the rapid rise in real estate prices in recent years. In terms of household asset allocation, real estate constitutes the majority of household assets, with investment in real estate being the primary means of investment for households. As for financial asset allocation, households mainly rely on savings and holding cash deposits, with a majority of households not holding risky financial assets, resulting in a low overall holding ratio of risky financial assets.

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References

- [1] Yin Zhichao, Huang Qian. Review of the research on the puzzle of limited participation in the stock market. *Economic Review*, 2013(06): 144-150.
- [2] Zhang Jian, Liang Ling. Empirical Study on the Impact of Family Heterogeneity on Financial Asset Allocation. *Journal of Chongqing University (Social Sciences Edition)*: 1-11 [2021-05-06].
- [3] Nie Ruihua, Shi Hongbo, Mi Zichuan. Review and Prospect of Research on Family Asset Selection Behavior. *Economic Problems*, 2018(11):41-47.
- [4] Zhou Yueshu, Liu Maobin. Analysis of the Impact of Household Financial Asset Structure Based on Life Cycle Theory. *Shanghai Finance*, 2014(12):11-16.
- [5] Wu Weixing, Yi Jinran, Zheng Jianming. Investment structure of Chinese households: an empirical analysis based on life cycle, wealth and housing. *Economic Research*, 2010, 45(S1): 72-82.
- [6] Dou Tingting, Yang Lieshe. Empirical Study on the Financial Asset Selection Behavior of Urban Households - Survey from Xi'an City, Shaanxi Province. *Accounting Friends*, 2013(26):47-52.
- [7] Gary Charness, Uri Gneezy. Strong Evidence for Gender Differences in Risk Taking. *Journal of Economic Behavior and Organization*, 2012, 83(1).
- [8] Wu Weixing, Wang Zhizheng, Wu Kun. A review of household finance research: from the perspective of asset allocation. *Science and Decision Making*, 2015(04):69-94.
- [9] He Yangping, He Xingqiang. Health and Family Risk Financial Asset Investment Participation. *Journal of South China Normal University (Social Sciences Edition)*, 2018(02): 135-142.
- [10] Harvey S Rosen, Stephen Wu. Portfolio choice and health status. *Journal of Financial Economics*, 2004, 72(3).
- [11] Yin Zhichao, Song Quanyun, Wu Yu. Financial knowledge, investment experience and household asset selection. *Economic Research*, 2014, 49(04): 62-75.
- [12] Wu Weixing, Wu Kun, Zhang Xuyang. Financial literacy and the effectiveness of household asset portfolios. *International Finance Research*, 2018(05):66-75.
- [13] Zhou Hong. Risk Attitude, Consumer Financial Education and Family Financial Market Participation. *Economic Science*, 2015(01): 79-88.
- [14] Wei Xiaole, Liu Dongge. Empirical Study on the Influencing Factors of Household Financial Assets of Urban and Rural Residents in China. *National Business News*, 2016(28): 79-81.
- [15] Wu Yuanyuan, Li Jing. Research on the threshold effect of Chinese household wealth level on their asset allocation. *Shanghai Economic Research*, 2019(03): 48-64.
- [16] Zang Rihong and Wang Yu. "Social Trust and Urban Household Risky Financial Asset Investment: Empirical Research Based on CFPS Data." *Journal of Nanjing Audit University*, 2017, 14(04): 55-65.
- [17] Miquel Faig, Pauline Shum. Portfolio Choice in the Presence of Personal Illiquid Projects. *The Journal of Finance*, 2002, 57(1).
- [18] Hu Zhen, Zang Rihong. Risk Attitude, Financial Education and Family Financial Asset Selection. *Journal of Business Economics and Management*, 2016 (08): 64-76.
- [19] Lv Xueliang, Wu Weixing. The impact of financial development on household investment portfolios: an analysis based on regional differences. *Shanghai Finance*, 2015(09): 51-59.
- [20] Gan Xiaoli, Yuan Shengjun, Wu Jun. Research on the Impact of Financial Environment on Household Financial Asset Selection: Evidence from the Micro-measurement Perspective of the China Household Finance Survey. *Accounting and Economic Research*, 2019, 33(02): 83-100.
- [21] Irwin Friend, Marshall E. Blume. The Demand for Risky Assets. *The American Economic Review*, 1975, 65(5).
- [22] Michael C. Fratantoni. Homeownership and Investment in Risky Assets. *Journal of Urban Economics*, 1998, 44(1).
- [23] Zhao Weiya, Wang Wei. Observation on the Wealth Effect of Urban Housing in China - Based on CHFS2010 Micro-Survey Data. *Journal of Guizhou University of Finance and Economics*, 2013(05): 7-14.
- [24] Chen Yongwei, Shi Yupeng, Quan Wuxie. Housing Wealth, Financial Market Participation, and Household Portfolio Choice: Evidence from Chinese Cities. *Financial Research*, 2015(04): 1-18.
- [25] Shi Leying. Research on Influencing Factors of Chinese Household Financial Asset Investment Behavior. Fudan University, 2013.
- [26] Chen Xunbo, Zhou Wei. Household Wealth and Consumption of Urban Residents in China: Evidence from the Micro Level. *China Economic Issues*, 2013(02): 46-55.
- [27] Li Tao, Chen Binkai. Household Fixed Assets, Wealth Effect and Consumer Spending: Empirical Evidence from Urban Families in China. *Economic Research*, 2014, 49(03): 62-75.
- [28] Zhou Yuqing, He Guangwen. The Impact of Housing on Household Financial Asset Allocation. *Journal of Zhongnan University of Economics and Law*, 2019(02): 76-87+159-160.
- [29] Wu Weixing, Shen Tao, Jiang Tao. Does Real Estate Crowd Out Risky Financial Assets in Household Portfolios? - Empirical Analysis Based on Microsurvey Data. *Scientific Decision Making*, 2014(11): 52-69.
- [30] Ji Xiangyu, Lu Wanqing. Household Registration Attributes, Home Ownership and Choice of Household Financial Assets. *Financial Development Research*, 2017(09): 10-17.