

Research on Financial Risk Prevention and Control

Based on Real Estate Asset Bubbles

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Abstract—The central economic work conference held in 2016 made it clear that there was "accumulation of financial risks" in China's economic operation. Despite the overall control of financial risks in China, the risks of stock market, bond market, currency fluctuation and real estate bubble are more worthy of high vigilance. In the deployment of economic work in 2017, the prevention and control of financial risks is highly valued. We need to put more emphasis on the prevention and control of financial risks and what's more we need to focus on preventing and controlling asset bubbles, ensuring that no systemic financial risks occur and leading to the financial crisis. This paper takes real estate as the research object, studies the degree of its asset bubble and its main causes, and probes into the prevention and control strategy of the financial risk that it can cause.

Keywords—real estate; asset bubbles; influencing factors; financial risk; the prevention and control

I. INTRODUCTION

With the rapid rise of home prices in China, real estate bubble and financial risk have aroused the attention of people and management. Internationally, the financial crisis caused by the housing bubble has left some countries and regions with painful lessons. Therefore, it is of great significance to explore the relationship between real estate and finance, to study the property bubble and the conduction of financial risk.

II. THE FORMATION OF REAL ESTATE ASSET BUBBLES AND FINANCIAL RISKS

Asset bubbles are caused by speculation. In a certain period of time, if under the influence of some factors, the market price of some assets tends to rise, people will buy the assets so as to obtain the market price difference, that's the asset speculation. Under the influence of asset speculation, the demand of this asset will increase, and its market price will rise. The rise in asset prices has reinforced expectations that more people will be involved in asset speculation. Once asset speculation becomes a wave, asset bubbles form. The most speculative assets in all kinds of physical assets and financial assets are mainly real estate and stocks. Asset bubbles were mainly caused by speculation in real estate and stocks.

Once a serious bubble is forming in the real estate market, there will be financial risk, the risk of a financial crisis. When real estate prices rise, people are taking bank loans in various ways to speculate on real estate. But the real estate market is unlikely to rise unbridled, once the housing bubble bursts, speculators will not be able to repay Banks' loans, and Banks' non-performing loans will grow rapidly. When Banks' non-performing loans accumulate to a certain extent, a group of Banks will go bust, and a financial crisis in the form of a banking crisis will erupt. In addition, once the housing bubble bursts, the economic downturn will be caused by a variety of transmission mechanisms. Firstly, as prices fall in the real estate market, the wealth of people holding real estate will decrease, and they will reduce consumption and investment spending accordingly. This is the so-called "wealth effect". Gross domestic product will fall under the impact of a reduction in consumer spending and investment spending. Secondly, as the real estate market prices fall, the bank's non-performing loans will be increased, in this case, the Banks will reduce lending, credit conditions strictly, which can lead to the contraction of money supply, exacerbated by the contraction of gross domestic product (GDP). Thirdly, if the bubble burst in the housing market, the banking crisis would lead to bankruptcies and further recession.¹

III. ANALYSIS AND STATUS QUO OF CHINA'S REAL ESTATE ASSET BUBBLE

A. Basic Status Quo of China's Real Estate Market

- Since the second quarter of 2015, the real estate market has been showing a recovery trend. As shown in "Fig. 1", the sales area of commercial housing is increasing year-on-year, since April 2015, it has been negative. And then we have a big increase. This year, in the destocking policy and the loose monetary environment, real estate sales continued last year's hot trend. In March, April and May, the year-on-year growth rate of the sales area was 37.66%, 44.07% and 24.24%, stayed high. Real estate sales in the first five months of this year totaled 480 million square meters, with a year-on-year growth of 33.20% in "Fig. 2".

¹ Wang Li. On asset bubbles and financial risks in China [J]. Fujian BBS (humanities social science edition), 2008(02): 4-8.

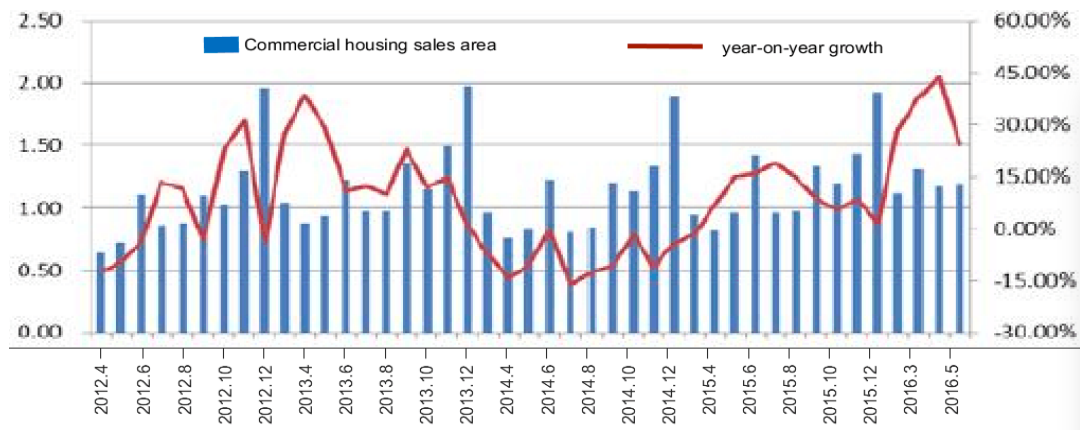


Fig. 1. The monthly value of commercial housing sales and the year-on-year growth rate.



Fig. 2. 2012-2016 China's commercial housing sales area cumulative value and year-on-year growth rate.

- Development and investment of real estate in China. Starting in 2014, the new floor area of commercial housing has been decreasing from year to year, which was reversed in the first quarter of 2016. As shown in "Fig. 3", in February 2016, the annual growth rate of new commercial housing starts from negative to

^b Data source: EPS database, Chinese real estate database
13.70% for the first time in two years, and the next three months are 19.20%, 21.40% and 18.30%, respectively. Figure 4 shows that in February 2016, the growth rate of real estate investment was first negative, and the year-on-year growth rate was 9.67%, 9.70% and 6.56% respectively.



Fig. 3. The new construction area and the year-on-year growth rate of commercial housing in China in December and 2016.

^c Data source: EPS database, Chinese real estate database



Fig. 4. 2012-2016 China's commercial housing accumulation of new construction area and year-on-year growth rate.

- The trend of real estate prices in China. In May 2016, the average price of a hundred urban residential samples was 11,662 yuan per square meter. The price index for a hundred cities grew by 10.34 percent year on year, expanding by 1.36 percentage points from the previous month, indicating that residential prices are still on the rise. Cities housing price index showed

that first-tier cities price growth is higher than that of second - and third-tier cities, in May 2016, the first-tier cities price index rose 26.82%, rose 1.84%, year-on-year growth of record in recent years. As can be seen in "Fig. 5", the total sales volume of commercial housing in China in January-May 2016 totaled about 36.775 billion yuan, a year-on-year increase of 50.7%.



Fig. 5. The monthly value and the year-on-year growth rate of China's commercial housing sales in 2012-2016.

B. Property Asset Bubble Performance and Cause Analysis

The real estate bubble is a more common economic bubble. It refers to the process or state of real estate price rising and obviously deviating from its real theoretical value. The concrete performance of the real estate bubble mainly focuses on five aspects. First, the housing price continues to expand, which clearly exceeds the payment capacity of the newly needed group and the active trading activity of speculative investment. Second, the scale of investment in real estate industry is expanding, which accounts for an excessive proportion of total investment in fixed assets of the whole society. Third, the development speed of the real estate industry is obviously faster than the pace of the national economy. Fourth, there is a high vacancy rate, too

much stock, and the supply and demand of the real estate market are seriously unbalanced. Fifth, land prices have soared and local governments have relied too heavily on land sales.²

There are five main reasons for the housing bubble: one is overinvestment. 3China still faces a narrow dilemma of investment channel. Stock market has experienced a loss of liquidity of stock market crash in 2015, the stock market

² Yanxia Wu. The Real Estate Bubble's Forming and Precaution[J]. Canadian Social Science, 2007, 3(2).

³ Jingkui Zhou, the formation and evolution of real estate bubbles - an explanation based on the excessive hypothesis of financial support [J]. Finance and economics, 2006 (5).

fluctuations, the risk is bigger, the real estate industry with its characteristics of good value has attracted a lot of money, too much investment real estate industry has expanded, so that some cities have too much stock to breed bubbles.⁴ Second, financial support is excessive. Commercial Banks, trust companies and other financial institutions give too much financial support to the real estate industry. The real estate enterprises use high financial leverage to expand blindly, blindly enclosure, while also providing the speculators with funds to help inflate the bubble. Third, irrational expectations caused by incomplete information. The real estate market is a typical imperfect market, and there is a failure of incomplete information. When buyers expected future real estate prices will rise, it is easy to produce the demand situation, easy to form a panic buying herding effect, makes further unilateral deviated from the basic value and real estate prices, real estate bubble is produced. Fourth, the mode of economic development is extensive and the industrial structure is unreasonable. As an investment driven economic growth point, the real estate industry has attracted a great deal of money as an investment driven economy. Fifth, local governments rely too much on land finance. In the past, the performance appraisal of Chinese officials was mainly related to GDP, and many local government officials made achievements in the project of political achievements, made fortunes on land, and did not control the supply structure and supply of land. This has resulted in the development of real estate development in some cities. It is difficult to form a population gathering effect. The urbanization of the population lags far behind the spatial urbanization, which leads to the real estate bubble.

C. Real Estate Asset Bubble Measure

There are some common methods to measure the existence of real estate bubbles and the degree of bubble⁵, such as index method, statistical analysis method, basic theory value method and theoretical analysis. According to the research focus and the availability of data, this paper combines the index method and the comparative analysis method to select the real estate investment as the ratio of GDP, the ratio of house prices to the land price index. Respectively in combination with the annual data from 2005 to 2015 in our country, Japan in 1985-1991 (the real estate bubble) residential price index and Hong Kong () before and after the subprime crisis in 1991-2001 data, analysis of the current real estate market bubble in China.

- Real estate investment as a share of GDP. Overinvestment is one of the main factors that lead to the real estate market bubble, and the proportion of real estate investment as a proportion of GDP can be used as an effective measure of bubble. Hong Kong experienced a more serious property bubble around 1997, with real estate investment accounting for more than 14% of GDP and even 21.1% in 1997. Figure 6

⁴ Mengxuan Li, Cao Yang: measurement and genetic analysis of China's real estate market bubble - based on the perspective of behavioral finance [J]. Macroeconomic research, 2013 (9).

⁵ Jianxin Lu: the measure and cause analysis of real estate bubble [R]. 2008 China finance and investment development report, 2009.

shows the proportion of real estate investment in Hong Kong from 1991 to 2001 and the proportion of real estate investment in China from 2005 to 2015. China's real estate investment has been more than 14 percent of GDP since 2009. In 2013, it was 21.3%, reflecting the high dependence of the Chinese economy on the real estate industry, and also the problem of excessive investment in the real estate market. With the growth of macro economy slowing down, the growth rate of real estate investment in the last two years has fallen to single digits, and the excessive behavior of the real estate market has been restrained. However, the proportion of investment is still high, and there is a huge crowding out effect on the development of other industries. From the perspective of investment, there is a serious bubble in China's real estate.

- Price-to-income ratio. The price-to-income ratio is equal to the ratio of the total price of a set of medium-sized commodity houses to the annual income of a middle-income family. It reflects residents' ability to pay for housing. According to the development experience of developed countries, the reasonable range of price-to-income ratio is 3-6 times. The bigger the price-to-income ratio, the more likely there is a real estate bubble. The housing price income ratio is mainly divided into the national 50 cities, first-tier cities and second-tier cities. In the obvious situation of the regional and urban differentiation of the real estate market, the average price-to-income ratio in the whole country reflects the real situation of the real estate market. We should focus on the ratio of house prices in major cities. Based on the selected data, 2010-2015 national slightly larger than 9 is 50 large and medium cities housing price to income ratio, major cities housing price to income ratio is more than 19, second-tier cities housing price to income ratio is about 10, are beyond the reasonable range of 3-6 times, shows that residents purchase payment pressure, especially the first-tier cities housing bubble inflated.
- Comparative analysis of land price index. The rapid rise of real estate prices is often accompanied by soaring land prices, and the land price index is a relative index reflecting the trend of land prices over time. During Japan's last century housing bubble, land prices continued to rise, and they continued to double. We compared the land price index of Japan in the 1990s and the land price index of China between 2000 and 2015. Japan's land price started to rise sharply in 1986, and peaked around 1989, compared with China's land price index. ⁶Since 2009, the rate of land price increase in China is almost close to the increase rate of land price during Japan's real estate bubble, to the extent that it needs to be warned. China's land price increase in recent years is also

⁶ Jinmei Huang: empirical analysis of real estate bubbles in China [D]. Xiamen university, 2007.

bigger, from the land price index, China's current real estate market has a bubble.⁷

IV. SUGGESTIONS ON THE PREVENTION AND CONTROL OF FINANCIAL RISKS OF REAL ASSET BUBBLES

A. *Control the Supply of the Land Market, Diversify the Land supply, and Optimize the Allocation of Inventory*

Improving the land management system and introducing modern information system management. The secondary market is constrained by the supply and demand of the primary land market. Based on the real needs of secondary market, we should adjust the reasonable proportion of land used for real estate development and other projects. Strictly according to relevant land use regulations, eliminate the blind development of real estate and large-scale construction. With the transparency of the land market to drive the development of the real estate market, we will resolutely carry out the public and fair auction of state-owned land. In addition, the land timely supervision of the land that has been sold, should be careful to prevent the real estate enterprises from illegally manipulating the sale of land for profiteering, and resolutely crack down on the illegal behavior of the real estate land market. We will limit the amount of land sold in high-inventory cities and prevent the accumulation of new stocks, and increase supply and correction market expectations for first-tier cities. Optimize the inventory of inventory, such as encouraging developers to transform it into public rental housing, industrial parks, etc. We will encourage developers to develop the housing rental market, develop old-age health properties and cultural tourism estates, and promote the digestion of stocks. Pay attention to the integration of production city, improve the supporting facilities and public services of the city, and improve the supporting facilities of public resources such as transportation, business and education medical treatment.

B. *Implement the Purchase Restriction Policy, Control the Market Demand Irrational Expansion*

The expectation of future house price movements is the most important factor affecting consumers' purchasing decision. In the context of rapidly rising housing prices, the housing market is expected to be good, and many families are optimistic about the discounted value of real estate assets, and then increase its asset value by buying property. Due to the asymmetric information of the real estate market, under the influence of "herd effect", more and more families have invested in the real estate market, resulting in irrational expansion of real estate demand. By strictly enforcing the purchase restriction policy, it can effectively restrain the irrational demand of this class, stabilize the housing price, and frustrate its rapid growth trend, thus changing the market expectation of real estate and influencing consumers' purchasing decision.

C. *Controlling Real Estate Finance Loans, Strictly Restricting the Flow of Credit to Invest in Speculative Buying*

Banks are the main source of funds for the real estate market. Once the housing bubble bursts, Banks will be the biggest payers. Without the inflow of funds, there will be no market bubble forming, so strict financial regulation of Banks is also one of the coping mechanisms for the real estate bubble. The primary mechanism of controlling the real estate financial market is to control the loan amount of the real estate market, and introduce the financial borrowing to control the speculative investment in real estate. Secondly, by controlling the rhythm of credit release, establishing a sound credit mechanism, improving the quality of loans, and minimizing the risk of non-performing loans; thirdly, establish financial market research and analysis ability, and evaluate risks effectively during the loan process; finally, strengthen the post-loan supervision ability.

D. *Establish a Real Estate Bubble Monitoring System and Real Estate Market Development Long-term Mechanism*

We can improve the macro monitoring system and monitoring data on land supply and taxation systems and add the price-to-income ratio, real estate investment accounts for a share of GDP and the proportion of fixed assets investment into the real estate asset bubble monitoring system. Through the collection and analysis of real estate market information, we can make periodic evaluation and prediction of the operation of the real estate market as data support for government control and decision. And regularly publish the market report, increase the transparency of the real estate market, reduce the buyers and real estate developers, the "information asymmetry" between the elimination of the buyers information disadvantage, reduce the irrational purchase behavior due to inadequate information, establish long-term effective mechanism of the real estate market development, and guide the healthy development of the real estate market.

V. CONCLUSION

From the perspective of real estate bubble and financial risk relationship, this paper studies the prevention measures of real estate bubble and bank financial risk. The view is that the state needs to build on the existing financial system of stability and innovation. By looking at the real estate industry and the financial sector from different perspectives, reasonable adjustment of the housing supply and demand structure, strengthening ties between the two industries, thus reducing the possibility of real estate bubbles and financial risks.

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⁷ Rongqing Zheng, Song Huaren. Research on the current real estate market bubble in China - based on comparative analysis of international data [J]. Contemporary economy, 2016,(22):4-6.

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