Research on the Influencing Factors of the Real Estate Industry Crash

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Abstract. The real estate crash is a complex and far-reaching phenomenon, involving many aspects of the economy, policy, market behavior and financial system. By subdividing and categorizing the influencing factors of the real estate crash, this paper explores the logic and reasons behind the crash in a multi-dimensional way on the basis of combing and summarizing the relevant domestic and international literature and research. This paper finally finds that the real estate crash is mainly affected by the demand side, the supply side and the social side of the three major aspects of the impact and role, through the slowdown in social and economic growth, local government policy adjustments, demographic attitudes and other factors that jointly cause the real estate industry to crash phenomenon.

Keywords: real estate;crash;influencing factors;stock price;

1 Introduction

Real estate is the mainstay of the national economy, which has a huge pulling effect on the employment and consumption of the national economy. Since the 21st century, real estate prices have risen sharply, and its changing situation is difficult to predict. According to the data from China Statistical Yearbook (2020), the number of real estate development enterprises in 2019 increased by 4 times compared with 20 years ago. The rapid rise of the real estate industry plays an important role in the economic development of various industries and countries. As real estate plays an increasingly

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important role in the national economy, there is a correlation between housing prices and stock prices, and investment has also become a key concern. There are many herd effects and hot money effects in the market. There are a lot of bubbles in the real estate market, resulting in financial risks. In order to maintain the long-term equilibrium of the real estate market, the government has increased its regulatory capacity and paid more and more attention to the real estate industry. However, since 2019, the real estate industry has stagnated, housing prices in some areas have begun to decline, and the real estate market has been sluggish.

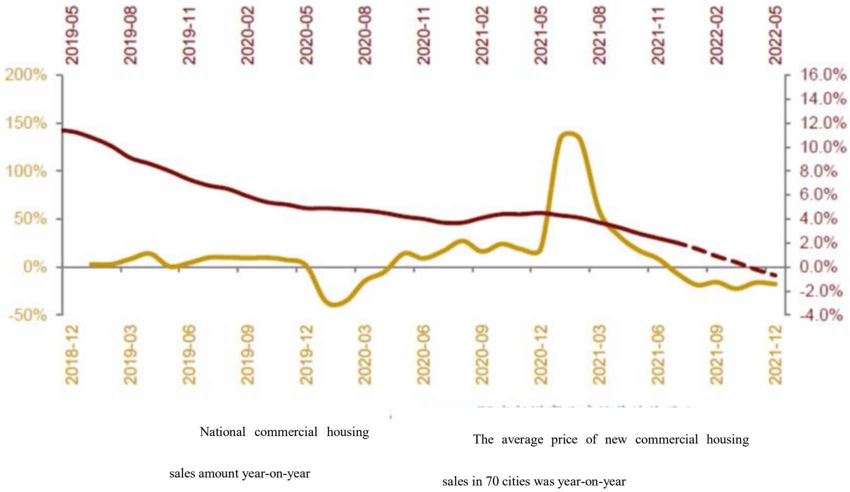

Fig. 1. Trends in single-month house prices, 2019-2022 (Source: Wind)

As of 2023, China has seen a number of regional housing prices sharply reduced and even a discount situation, Evergrande and other real estate enterprises have also appeared in the "thunder" phenomenon, stock price crash and even bankruptcy liquidation. In the short term, the policy-intensive force is expected to attract funds into the real estate sector and promote stock prices. From the perspective of market performance, since 2022, after the introduction of strong policies, the trading sentiment of the real estate sector has risen rapidly, and the industry index has risen in stages. However, due to the fact that the substantial improvement of the fundamentals is not yet stable, the continuity of the market still depends on the rhythm and effect of the policy implementation, which is ultimately reflected in the residents ' expectation of future income and housing price changes, as well as the sales and credit repair of real estate enterprises, which still needs some time to observe. Therefore, the analysis and research on the influencing factors of the real estate crash is of great significance to the stable operation of the real estate industry itself and the later risk management.

2 Research Overview at Home and Abroad

2.1 Government Perspective

Foreign scholars began to study the real estate market earlier, believing that the government should guide the real estate market and prices through different factors. Hui C M and Ho S M [1] studied the impact of land use regulation on land supply, housing supply and housing prices in Hong Kong, and found that land use regulation has a significant impact on housing prices. Jung H and Lee J [2] analyzed the impact of macro-prudential policies on house price growth in 73 regions of South Korea through the event study method, and found that debt-to-income ratio and loan-to-value ratio play an important role in stabilizing house prices, especially debt-to-income ratio. Domestic scholars also believe that government management of the real estate industry is effective. Gu Haifeng and Zhang Yuanjiao [3] found that the adjustment of the deposit reserve ratio has a significant regulatory effect on real estate prices. Zhou Yangmin [4] found that the purchase restriction order, property tax and land management policy have a significant impact on the anti-risk ability of real estate listed companies. Du Qingsong [5] found that the mortgage interest rate-linked basic interest rate policy has a positive impact on the stock price of real estate companies, especially for small-scale, Shenzhen and private real estate companies. Through empirical analysis, Liang [6] found that the two rounds of purchase restriction policies have a significant negative impact on the value and stock price of real estate listed companies.

2.2 Housing Price Perspective

Kiyotaki and Moore [7] studied the ability to borrow and found that asset valuation is very important in the borrowing cycle. Wang Weiquan (2008) [8] believed that there are three kinds of changes in the direction of stock price and house price crash: co-movement, reverse movement and price break. In the study of different regional characteristics, Nan-Kuang Chen (2001) [9] analyzed the fluctuations of real estate prices and stock prices in Taiwan from 1973 to 1992, and found that rising housing prices promoted economic development and stock prices rose accordingly. Sheng

Songcheng et al. (2005)[10] studied the Shanghai real estate price index and the Shanghai Composite Index and believed that the weak correlation between the two was due to the lack of financing methods in the real estate market. Raymond Y. C. Tse (2001) [11] analyzed the negative correlation between real estate prices and stock prices, and proposed that the real estate market has an important impact on the stock market. Luo and Hou (2005) [12] found that money supply has a greater impact on real estate and stock markets. Zhou Jingkui (2005)[13] believes that money supply is the main factor causing asset price fluctuations. Wen Jun and Zhao Xufeng (2007)[14] found that there is a two-way causal relationship between real estate sales price index and the GDP index.

2.3 Other Perspectives

In the 1960s, foreign scholars found that there was a significant correlation between financial information and stock price returns. Rapp (2010) [15] explored the impact of financial information on stock returns in manufacturing companies and found that financial information is positively correlated with stock returns. Clarkson et al. (2011) [16] believed that stock price is affected by many factors, such as oil price, interest rate, stock price index and national economy. Park and Shin (2013)[17] found that the profitability indicators of listed companies have the greatest impact on stock prices. At the end of the 20th century, domestic scholars[18] found that the domestic capital market was in a weak stage and showed cyclical anomalies. Li (2014)[19] took 1,354 listed companies in Shanghai and Shenzhen as samples and found that the stock price increase rate was positively related to earnings per share and negatively related to long-term debt ratio. Huang Yanhui et al. (2016) [20] found that earnings per share had the most significant impact on stock price. Chen Songli (2017) [21] found through empirical analysis that the financial information of China's A-share listed companies is linearly related to stock prices, especially profitability and cash flow indicators.

3 The Characteristics of the Real Estate Industry and the Phenomenon of Collapse

3.1 Characteristics of Real Estate Industry

In the past ten years, the housing price bubble in the real estate industry has risen sharply. Since 2016, it has experienced 'six consecutive rises', with an average annual growth rate of 13.55%. The price has seriously deviated from its value, resulting in the market price being separated from the support of actual users and exceeding the purchasing power of ordinary people.

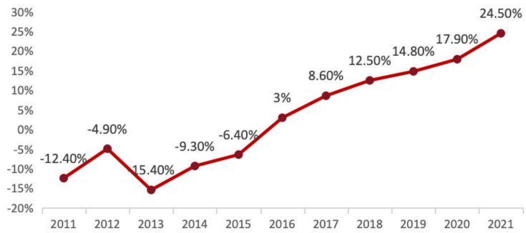

Fig. 2. Trend of housing price bubble in China (Source: numbeo)

Further analysis shows that the real estate industry is a comprehensive, systematic and planned industry with the following characteristics:

(1) Location fixity. Real estate is a combination of real estate and real estate. The planning of all real estate needs to be carried out around fixed real estate, which is fixed in position. Therefore, it is also called real estate, which is limited to the need for regular or necessary movement. At the same time, due to its relatively fixed location, local natural climate, government policies, social preferences and other factors have a greater impact on the value of real estate assets themselves. For example, when making investment decisions on downtown real estate, investors need to consider the impact and significance of the location on the overall development plan, and need to weigh the specific uses and methods.

(2) Long-term usability. The land use nature of real estate projects is divided into industrial land, commercial land and residential land, of which residential land has the longest use time (70 years), industrial land has 40 years of use time, and commercial land has 50 years of use time. This reflects that real estate projects are not only to meet short-term demand, but also to focus on long-term use and value appreciation.

For example, the average price of new real estate in Shanghai in 2010 was 19,168 yuan/m2, and now the average price of new real estate in Shanghai in 2024 is 57,277 yuan/m2.

(3) Intensive investment. Real estate projects need to invest a lot of money and occupy a long time, including land transfer fees, construction materials fees, design fees, etc., so they have a lot of investment characteristics and belong to a capital-intensive industry. At the same time, the return cycle of the real estate industry is relatively long. The purchase of real estate requires a large capital investment in the initial stage, but the income can be obtained after a long time. Generally, the first payment can be obtained after the completion of the construction and the completion of the sales phase. For the project itself, there is no doubt that the risk is greatly increased, and a large number of buyers have the investment tendency, so the real estate industry is a high-risk and high-yield project.

(4) Greatly influenced by the policy. The real estate industry is a comprehensive industry with land and buildings as its business objects, engaged in real estate development, construction, operation, management, maintenance, decoration and service, and a variety of economic activities. The government's attention to the real estate industry is high, macro-control and micro-management are strong, and policies have an important impact on the development of the real estate industry. The real estate land needs to be obtained from the government. The policy orientation represents the government's attitude to a certain extent. From the previous' land economy 'to the current' debt 'orientation, the government's attitude towards land has changed, which has led to changes in the wind direction of the real estate industry. Real estate companies will be affected in many aspects, such as land purchase cost, construction process, sales difficulty and so on.

3.2 Crash Phenomenon

Crash refers to when the existing shareholders are all covered, no new shareholders enter, when the covered shareholders begin to only know how to cut meat and sell stocks, but refuse to buy stocks, resulting in a vicious circle, continued to fall, and eventually caused the phenomenon of the stock market closing. In terms of sales dimension, 2024 is the first negative growth in China's real estate industry in nearly 10 years, and the sales of China's top 100 housing enterprises fell by 49%

year-on-year. For example, Greenland Holdings expects that the net profit attributable to the parent company's owners will be lost in 2023, ranging from CNY 7 billion to CNY 9 billion, and the net profit after deducting non-recurring gains and losses is expected to be a loss of CNY 7.4 billion to CNY 9.4 billion. The reasons for its pre-loss include: the real estate market continues to slump, resulting in a decline in asset prices. The company plans to provide asset impairment provisions of 11 billion to 13 billion yuan, mainly for real estate inventory depreciation. At the same time, the real estate industry and infrastructure and other related industries are in deep trouble, resulting in a year-on-year decline in corporate operating income, a year-on-year decline in the gross margin of real estate settlement, and the 'collapse' phenomenon of China's real estate industry is obvious.

4 Influencing Factors of the Real Estate Industry Crash

4.1 Demand Side

On the demand side, the instability of the domestic and international environment has seriously affected market expectations, such as future policies such as US import and export restrictions on China and central bank interest rate cuts. Coupled with the adjustment of the country's structural contradictions, such as the friction of the labor market and the mismatch between supply and demand, and the rectification of industries such as the Internet and finance. From the perspective of economic growth, in the first four years of the outbreak, its per capita annual income growth rate was as high as 10.4%. However, between 2020 and 2023, its average annual growth rate was only 6.3%, which was significantly lower than that before the epidemic. As a result, the national income fell, and there was no ability or motivation to buy some real estate. At the same time, due to the development of technology and the improvement of automation level, some jobs in traditional industries will be replaced by machines, and the slowdown of GDP growth has also led to continuous layoffs in various industries, and the overall unemployment rate has increased by 1%, especially the youth unemployment rate between 16 and 24 years old has reached 20.8%.

According to the data of China Index Research Institute (CIRI), in 2023, the total sales of the top 100 real estate enterprises amounted to RMB 6,279.10 billion, a year-on-year decline of 17.3%, of which the sales of top 100 real estate enterprises in a single month in December decreased by 35.9% year-on-year, and increased by

20.8% sequentially. China's real estate market has stepped into the inventory era from the incremental era, supply and demand are basically balanced, with a surplus in most areas. The main demand in the future will come from urban renewal and population inflow, but most non-metropolitan area city clusters have already experienced a supply surplus, and the industry has entered a reshuffling stage. The property of real estate has changed, most people use it residentially, and only a very small number of people are left to invest in planning. In 2020, China's urban housing unit ratio will be 1.09, and the first-tier and second-tier cities will be 0.97 and 1.08, respectively. China's housing as a whole has formed a static equilibrium state, with a serious shortage of increments and a decline in national demand for buying houses.

4.2 Supply Side

On the government side, the impact of land finance on the supply side of real estate is mainly reflected in the importance of land transfer income to local government finance. For example, under the requirement of 'house-to-land', the supply of residential land in many first-and second-tier cities will decline significantly in 2024. In 2021, 22 key cities will implement the "two concentration" system, and the number of residential land supply batches throughout the year will be limited to no more than three times. At the end of 2022, according to the principle of "land determined by housing," the land supply plan will be linked to the operation of the land market, and the transaction volume of residential land in the past three years will be taken into account. In 2023, the "pre-supply land list" system will be implemented, and the pace of land supply in various places can be flexibly adjusted according to market demand. From January to May 2024, according to data from the National Bureau of Statistics, the sales area of new commercial housing was 366.42 million square meters, a year-on-year decline of 20.3 %, of which residential sales area decreased by 23.6 %. New commercial housing sales of 3566.5 billion yuan, down 27.9 %, of which residential sales fell 30.5 %. Among them, the area of residential land supply in Nanjing, Suzhou and Ningbo decreased by more than 50 % compared with that in 2023. The supply area of residential land in Guangzhou decreased by 34.0 % year-on-year, which was the first decline in the past five years.

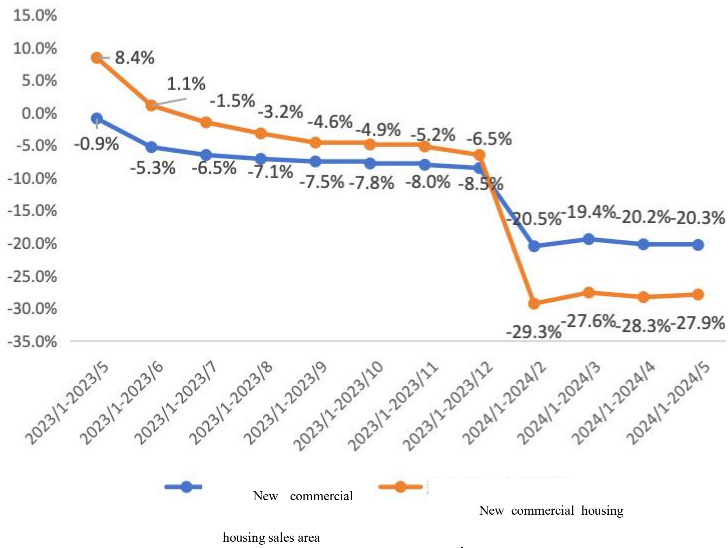

Fig. 3. Sales area and sales growth rate of new commercial housing in China

In terms of industry, the phenomenon of high leverage in the real estate industry has gradually emerged, and people's borrowed funds account for a high proportion of their own funds. The risk of real estate maturity mismatch is the problem of short-term capital source and long-term capital application. This mismatch can cause companies to face financial pressure in the short term, especially when debt needs to be repaid, and a liquidity crisis can occur if the assets of the company cannot be realized in time or the revenue is not enough to cover the maturing debt. For example, Evergrande's debt ratio was as high as 151.9% when it went bankrupt, and Evergrande's high leverage also led to its high costs. Evergrande's total debt was as high as 2.2 trillion yuan, of which 1.6 trillion yuan was short-term debt, that is, debt due within one year. Evergrande's asset-liability ratio reached 87.5%, much higher than the industry average.

4.3 Social End

With population growth usually means an increase in the demand for housing, thus stimulating the development of the real estate market. At the same time, population migration will also lead to changes in the real estate market demand in different regions, and investors need to consider the population trends of the regions moving in and out. Due to the aging of the domestic population, the national demand for new homes has gradually declined, and the population of the right age to buy has been decreasing, and the real estate has gradually appeared a "crash" state. At the same time, people's concept of the real estate market has changed, for example, from "buying a house is investing" to "buying a house to live in." With the improvement of people's living standards and the increasing requirements for the quality of life, buyers' requirements for the comfort, convenience and environmental quality of the house itself will gradually increase.

5 Conclusion

The influencing factors of the real estate crash are complex, mainly decided by the demand side, the supply side and the social side, and finally caused the bursting of the housing price bubble, the housing enterprises were hit hard, and the real estate market appeared huge fluctuations.

On the demand side, the real estate market expectation depends largely on the uncertainty of the domestic and international environment. At the same time, people's income has declined, the number of people who have the ability to make investment plans for real estate has plummeted, and most of the population has used real estate for residential purposes. Secondly, the complexity of trade relations may affect the cost of foreign financing of real estate and the cost of building materials imports.

On the supply side, the real estate market is mainly affected by two levels of government and industry. Local government land finance is closely related to the cyclical fluctuations of the real estate market. With the emergence of "fixing land by housing", the government no longer sells land excessively, and the supply drops accordingly. For developers, the widespread phenomenon of high leverage within the industry not only increases the financial risk of enterprises, but also may adversely affect the stable development of the entire industry. Once the market fluctuates, developers may not be able to repay their debts, resulting in stalled projects, which in turn affects the stability of the entire real estate market. In addition, the phenomenon of high leverage may also lead to a large number of bad debts in financial institutions such as banks, further aggravating the market turmoil.

On the social side, population is an important factor affecting the development of the real estate industry. The change of population, including population, structure, migration and so on, will have a profound impact on the supply and demand relationship, price trend and development trend of the real estate market. In particular, the aging of the population and the change of the concept of population purchase will lead to great changes in the property and demand for real estate.

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