

China's Real Estate Development: A Deepening Gloom or A New Beginning

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Abstract. Contemporarily, China's real estate industry is in recession especially under the shock of contractionary policies in 2020 and 2021. Developers are faced with challenges of deleverage requirements, lack of financing sources and slack demand of the housing market. However, by late 2022, Chinese government decides to take measures to regenerate property industry. It is now a watershed moment for developers from the darkest hour to a new era of China's real estate development. This paper mainly focuses on contractionary policy analysis in 2020 and 2021 and the impact on real estate firms. Based on the case study of Yango Group, it also points out expansive private firms are more likely to encounter debt crisis under 2020-and-2021 contractions. Moreover, the future development of China's real estate industry will be embraced with a brand-new picture, i.e., state-owned dominant and high quality-oriented. Overall, these results shed light on guiding further exploration of government influence in stimulating and stabilizing China's real estate development.

Keywords: Three red lines; loan concentration rules; presale funds; high leverage; high asset turnover.

1. Introduction

The establishment of commercial housing system in 1998 witnessed the beginning of the rapid development of China's real estate industry. In 2003, the real estate industry was officially regarded as a new drive force for China's economic growth [1]. Since then, the property industry began to thrive and prosper. These housing reforms primarily aimed to expand domestic demand and to deal with the consequences from the Asian financial crisis [2]. Apparently, they proved efficient when China's GDP growth rate increased from 7.85% in 1998 to 14.23% in 2007. Based on the data from Wind, the capital formation is the biggest contributor in driving GDP growth rate. Besides, the real estate development is a lengthy process. By aggregating all the property-industry-related output, the real estate investment accounts for about 50% in the total amount of capital formation [3].

However, an increasing number of well-being issues appear with the passage of time due to the heated housing market, e.g., the widening gap between rich and poor, the weakening of consumer expenditure [4]. According to World Bank, China's gini index climbed from 32.2 in 1990 to 43.7 in 2010 implying an expanding wealth inequality among people. Therefore, it is imperative for China to restrain the excessive growth in the real estate industry. Since 2010, Chinese government has implemented a series of regulatory restrictions to cool down the housing market, both on developers and consumers, which gained some positive outcomes but not completely inhibited the growth of housing prices. Until mid-2020, the most stringent policies (e.g., the three red lines came up imposing unprecedented pressure on real estate firms), particularly on private firms. As a consequence, many companies with high leverage and with no access to financing defaulted on debt and their stock prices slumped deeply over the last two years. The real estate industry is experiencing an extremely cold winter and inevitably China's economy suffers. After going through over two years' macro control on real estate industry, the financing environment turns to be amicable since 8 Nov. 2022, when the National Association of Financial Market Institutional Investors (NAFMII) announced explicitly on its website that strong support on bond financing will be given for private developers [5]. Subsequently, more positive news is coming up aimed to expand financing sources for developers probably implying a strong determination has been made from Chinese leadership to regenerate the property industry.

Standing at a turning point from the trough of real estate industry to the next round of expansion, this paper mainly focuses on the following areas: 1) a quick review of real estate macro control development in recent two decades with real estate policy analysis in 2020 and 2021; 2) a case study on Yango Group to conclude what kind of firms are more vulnerable to 2020-and-2021 contractions; 3) outlook for China’s real estate industry in the next three years; 4) conclusions. Besides, there are many studies about the history of China’s real estate development and its importance in China’s economic growth. However, analysis on recent three-year property regulatory policies and prospects is not sufficiently carried out, which will be addressed by this study.

2. Real Estate Macro Control

China’s real estate development has been going through two stages: 1) government-subsidized housing system from 1949 to 1998; 2) commercial housing system since 1998. In the early years between 1978 and 1994, China took some tentative measures to improve domestic housing environment [6]. One of the most influential reforms was the establishment of regulations on commercial housing pre-sale license in 1994. The pre-sale rules become one of the prerequisites for the next two decades’ rapid development of real estate industry by allowing to use the high leverage among developers [7]. It was not until 1998 that the commercial housing system replaced the old housing system. It was a watershed moment that China’s housing planned economy transformed into housing market economy [8].

2.1 Five Phases of Macro Control

The housing market has experienced several boom-bust cycles since 1998. Each boom period corresponds to expansionary macro control and the bust period appears when macro policies are contractionary. Fig. 1 illustrates the growth rate and price changes of main property indicators from 2002 to 2022. The sale price of commercial residential buildings in China grows steadily with the price of 2,092 yuan/m² in 2002 and 10,396 yuan/m² in 2021 based on data from National Bureau of Statistics. However, other indexes are more volatile but with similar trends. Overall, property macro control are divided into five phases (seen from Table 1).

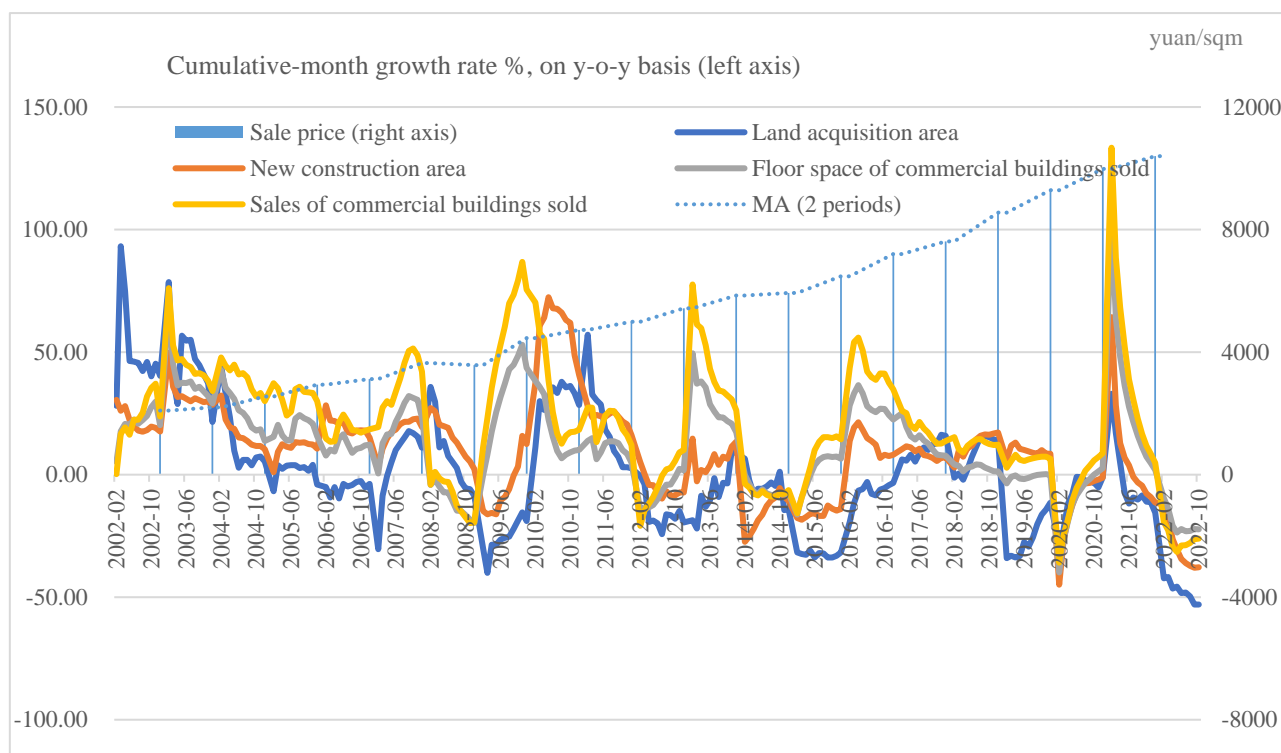


Fig. 1 Indicator Trends in Real Estate Development Analysis (2002~2022) Source: Wind.

Table 1. Five Phases of Macro Control on Property Development since 2002 Source: Government Official Websites.

	Period	Housing Price	Sales	Policy
Phase 1	2002~2008H1	up before down	up before down	contractions
Phase 2	2008H2~2009	up	up	expansions
Phase 3	2010~2013	up	down before up	contractions
Phase 4	2014~2016	up	up	expansions
Phase 5	2017~2021	up before down	down (despite hikes in 2021Q1)	contractions

Over the last the twenty years, macro control on real estate industry follows contraction-expansion-contraction cycles as is shown in Table 1. Nevertheless, after several rounds of contractions, the housing price showed a strong resilience against going down. In order to inhibit the housing price from further going up, China adopted unprecedentedly stringent measures in 2020.

2.2 Contractionary Policies (2020~2021)

Main contractionary polices are listed in Table. 2 between 2020 and 2021, which cause tremendous shock among real estate firms. First, the policy of Three Red Lines was proposed in the third quarter of 2020. Red line 1: debt-to-asset ratio excluding presales is not allowed to exceed 70%; Red line 2: net debt-to-equity ratio is not allowed to exceed 100%; Red line 3: cash-to-short-term-debt is not allowed to be lower than 1. The three red lines not only aim to optimize developer's balance sheet structures but also aim at changing what a firm should be focused on, i.e., not rapid expansion but being more quality-oriented [9]. From the selected four companies in Table 3, their red line 1 ratios are all above 70% indicating high leverage level among the developers. In fact, a large number of real estate firms take advantage of high leverage for rapid expansion these years. There is an inevitable relation between high leverage and crossing red lines [10].

Table 2. Contractionary Policies and Purposes (2020~2021) Source: Government Official Websites, China Real Estate Business (CREB).

Time	Contractionary Policies (2020~2021)	Main purpose
Aug. 2020	Three Red Lines	to decrease developer's leverage
Dec. 2020	Notice on Establishing Real Estate Loan Concentration Rules (Policy No. 322)	to limit bank loans to developers
Feb. 2021	Centralized Land Supply System	to strengthen government management on land supply
2021H2	Regulations on Property Presale Fundto Supervision	to restrict developers from using the presale funds on not relevant arrangements

Table 3. Three Red Line (RL) Ratios and Sales Rankings among Four Developers (2019~2020) Source: Dealing Matrix (DM).

Year	Firm	2019			2020				
		Sales rank	RL1	RL2	RL3	Sales rank	RL1	RL2	RL3
	Country Garden Holdings Co. Ltd	1	83.18	48.83	2.27	1	79.63	55.74	1.91
	China Evergrande Group	3	82.81	158.6	0.62	2	83.43	152.89	0.54
	Yango Group Co., Ltd.	14	77.62	135	1.32	18	78.64	88.47	1.68
	China Aoyuan Group Limited	25	87.24	118.3	1.21	32	78.03	96.2	1.18

Second, the bank's loan concentration rules were established in December 2020 with an aim to limit banks from providing loans for developers. The rules make different percentage caps for two ratios among five small and large banks: 1) ratio of housing loan balance to all loans balance with caps ranging from 12.5% to 40%; 2) ratio of residential housing loan balance to all loans balance with caps ranging from 7.5% to 32.5% [11]. Fig. 2 depicts upward trends in both ratios from late 2009 to December 2020 with Ratio 1 ranging from 17% to 29% and Ratio 2 ranging from 11% to 20%. With the implementation of loan concentration rules, both ratios turn to decline.

Third, supervision on property presale funds has been reinforced nationwide since the second half of 2021. It aims to restrict developers from inappropriately using presale funds. Tahoe Group Co., Ltd., for example, was facing short of funds since the beginning of 2020 and the pandemic broke out exacerbating the company’s predicament. As a result, Tahoe Group was unable to complete the construction and buyers could not get houses to live in as agreed in the presale contracts. The number of real estate firms short of funds (e.g., Tahoe Group) was increasing. More and more disputes were triggered among house buyers, developers and even government departments which drew great attention from Chinese government [12, 13]. Local governments implemented harsh regulations on strengthening presale fund supervision to make sure the right of house buyers can be protected. However, with no access to the presale funds, more developers are trapped in fund crisis and more buildings are left incompleting [14]. It becomes a vicious circle.

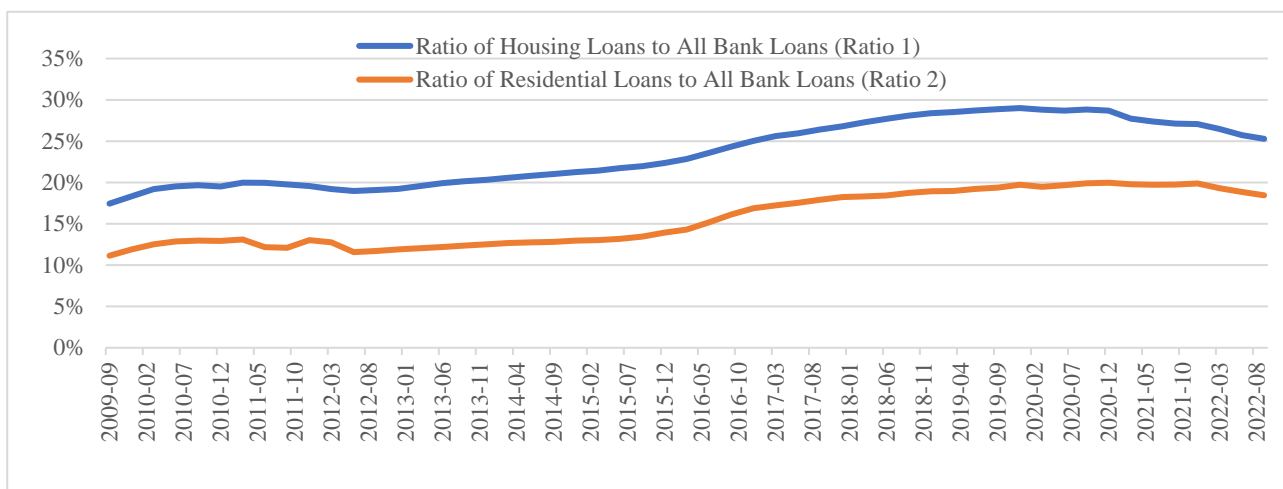


Fig. 2 Trends of Loan Concentration Ratios (2009~2022) Source: Wind

Overall, real estate firms are seriously affected by this round of contractions. Their financing sources are cut off and presale funds are frozen in the bank. Debt crisis is inevitable. According to DM, there are approximately 260 Chinese real estate firms financing by issuing bonds in mainland China and offshore. Among these firms, about 59 firms defaulted on bond repayment (including repayment extension) as illustrated in Fig. 3. The total amount of bond default was about 424.5 billion yuan in which 46% were offshore. Besides, over 90% were private firms and only one company was state-owned, which was Tianjin Real Estate Group Co., Ltd.

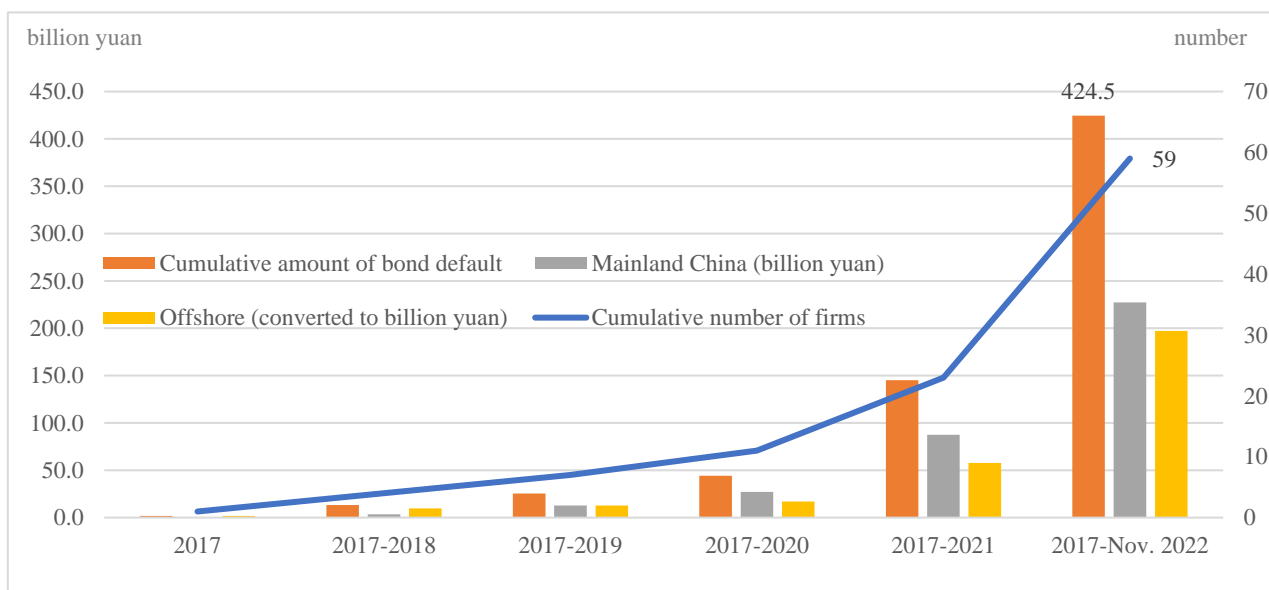


Fig. 3 Firms of Bond Default (28 Nov. 2022) Source: Wind, DM.

Table 4. Comparisons among Top 30 Firms (2019H1~2022H1): Firm Numbers, Sales and Sales Proportions Source: CRIC, Wind.

Top 30	2019H1			2022H1			Sales Growth Rate
	Num.	Sales (billion yuan)	Sales proportion	Num.	Sales (billion yuan)	Sales proportion	
State-owned	10	1,238.6	39%	14	1,307.7	59%	6%
Private	20	1,907.8	61%	16	894.6	41%	-53%
Total	30	3,146.4	100%	30	2,202.3	100%	-30%

In addition to debt crisis, the market share of state-owned companies is increasing although the sales in total are tumbling among top 30 from 2019 to 2022. Specifically, state-owned firm market share goes up from 39% to 59% as listed in Table 4. While among top 10, the number climbs from 46% to 70% based on the data from CRIC. On the other hand, private firms are seriously impacted not only in firm numbers, sales but also their market share. Many private firms are out of top 30 rank by 2022.

3. Expansive Private Firms More Vulnerable to 2020-and-2021 Contractions with Case Analysis on Yango Group Co., Ltd.

According to a research, a company with the revenue compound annual growth rate (CAGR) of over 15% is regarded as an expansive company [15]. By analyzing revenue CAGR among top 30 firms listed in Table 5, over 80% of firms possess characteristics of rapid expansion, and Yango Group Co., Ltd. (Yango Group or company hereinafter) is selected as a typical expansive firm for this case analysis. Yango Group is a private real estate company established in 1991 and listed in mainland China in 2002. Besides, developers who seek for rapid expansion have features like high leverage and high reliance on external financing [16]. This case analysis points out expansive private companies are more likely to encounter debt crisis under contractionary policies in 2020 and 2021.

Table 5. Sample Numbers, Revenue CAGR and Proportion of Expansive Firms among Top 30 Developers Source: Wind, CRIC.

	Sample number (not include firms with data missing)	Revenue CAGR over 15%	Proportion of expansive firms
Past 4 years (Dec.2015~Dec.2019)	29	25	86%
Past 10 years (Dec.2009~Dec.2019)	22	21	95%

3.1 Competitiveness

Indicators including sales and land obtaining capabilities are used to evaluate a firm's comprehensive competitiveness in the real estate industry. Yango Group has a sales rank in top 20 from 2017 to 2021 although it has a downward trend these years. From 2020 to 2021, top 100 developers dropped 3.5% in sales while Yango Group had a deeper decline by about 16% [17]. As for the value of land acquired from 2017 to 2021, Yango Group's rank descended from 12 to 27. From 2020 to 2021, the value of land acquired among top 100 developers decreased by 7% while Yango Group slumped by 18% from 562.7 billion yuan to 461 billion yuan referred to CRIC research [18]. Overall, Yango Group was competitive before 2020 with a rank among top 20 in both sales and value of land acquired. Whereas, during the two years from 2020 to 2021, company had a much deeper decline in both of the two areas and even defaulted on debt compared with others, which means a weakening in its competitive strength.

3.2 Development Phases Based on Cash Flow Analysis

Real estate industry is capital-intensive so cash flow is important. Companies need funds to obtain land, to invest for expansion, and to pay back interest of debt. Cash usually comes from operating and financing activities, either of which is deterred, a company may face liquidity issue. Fig. 4 shows cash flow trends of Yango Group from 2012 to 2021. Yango Group has been going through three development phases. Phase 1 corresponds to growth and rapid expansion before 2017, when company thrived with China’s booming housing market. Cash from operating and financing activities was used for further expansion. According to its annual reports, high asset turnover was one of company’s core competitiveness. Phase 2 represents for slowdown of expansion from 2017 to 2020. Financing sources were substantially deterred in 2017 which slowed down company’s investing activities. High asset turnover was no longer its core competitiveness. In order to deal with financing issues, company turned to speed up selling houses to generate more cash. Phase 3 is the debt crisis since 2021. Investment became stagnant, housing market was slack and company had to payback debts. By November 2021, company was trapped in serious debt crisis.

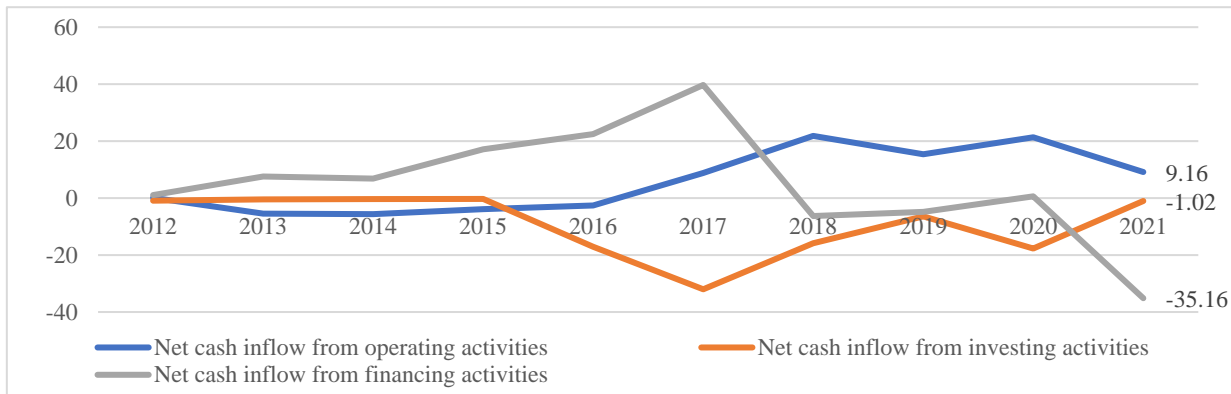


Fig. 4 Company Cash Flow (billion yuan, 2012~2021) Source: Wind.

3.3 Financing Composition

Company has a good competence in expanding financing sources. When banks adopted the Loan Concentration Rules in late 2020, company could hardly get loans from banks and had to turn to other sources. By 2021, company has over five channels to get funds compared with only three in 2019 as is presented in Fig. 5. It is noted that company get more funds from bond issuing in 2021 which increased its risk exposure to debt default. Besides, company’s financing balance decreased from 112.32 billion yuan in 2019 to 88.52 billion yuan in 2021. It was a good sign to payback debts and reduce the interest expenditure. However, the funds to repay long-term debts came from the increase of short-term debts. From 2019 to 2021, company’s financing balance within a year climbed from 30% to 49% which aggravated company’s liquidity issue.

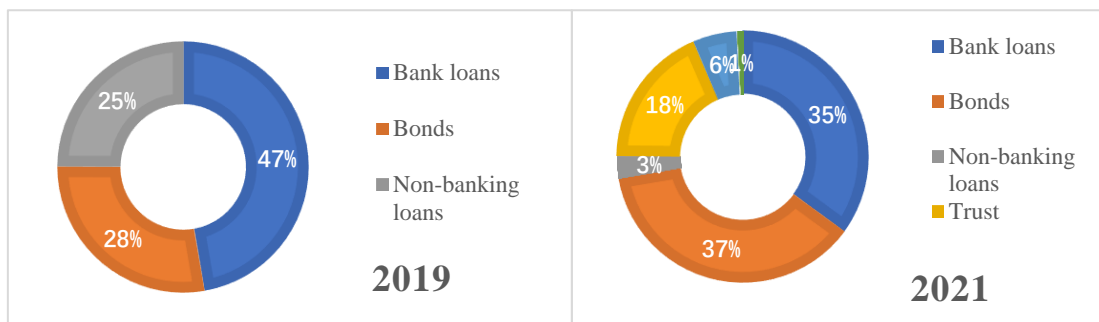


Fig. 5 Comparison of Yango Group Financing Sources (2019~2021) Source: Yango Group Annual Reports 2019 (left panel) and 2021 (right panel).

3.4 High Leverage and High Asset Turnover

High leverage ratio and high asset turnover ratio usually come up together. High asset turnover ratio means a short period of time from obtaining land to presale and then more sales can happen during a year. When the presale funds rise, the short-term debts rise too, pushing the leverage ratio go up further. Yango Group maintained higher leverage ratio and higher asset turnover ratio than the industry during most of time before 2020. It worked because the company had a very short period of time of 7 to 10 months from obtaining land to presale while others usually needed over a year [19, 20]. However, company's asset turnover ratio substantially dropped by over 50% from 0.25 to 0.12 while the industry almost kept the same due to a bleak housing market from 2020 to 2021. Seen from Fig. 6, company's sales tremendously dropped from 82.17 billion yuan to 42.53 billion yuan during the two years. A declining of presale funds signifies a shortage of cash from operating activities so that the company increased its bond issuing for external financing. With more and more short-term debt, company defaulted on bond repayment by November 2021. Overall, a higher leverage ratio along with a higher asset turnover ratio make company more vulnerable to contractions in 2020 and 2021.

Table 6. DuPont System of Yango Group (2016~2021) Source: Wind.

	2017-12-31	2018-12-31	2019-12-31	2020-12-31	2021-12-31
ROE	12.75	14.33	16.17	18.18	-28.44
ROE (mean)	-6.37	8.05	8.61	5.91	-0.68
Net profit margin	6.72	6.92	7.08	6.68	-17.62
Net profit margin (mean)	21.15	152.53	-4.59	70.10	-7.25
Leverage ratio	10.31	11.31	11.48	11.49	14.54
Leverage ratio (mean)	101.58	5.78	6.13	6.40	8.17
Asset turnover	0.20	0.24	0.21	0.25	0.12
Asset turnover (mean)	0.17	0.16	0.16	0.15	0.15

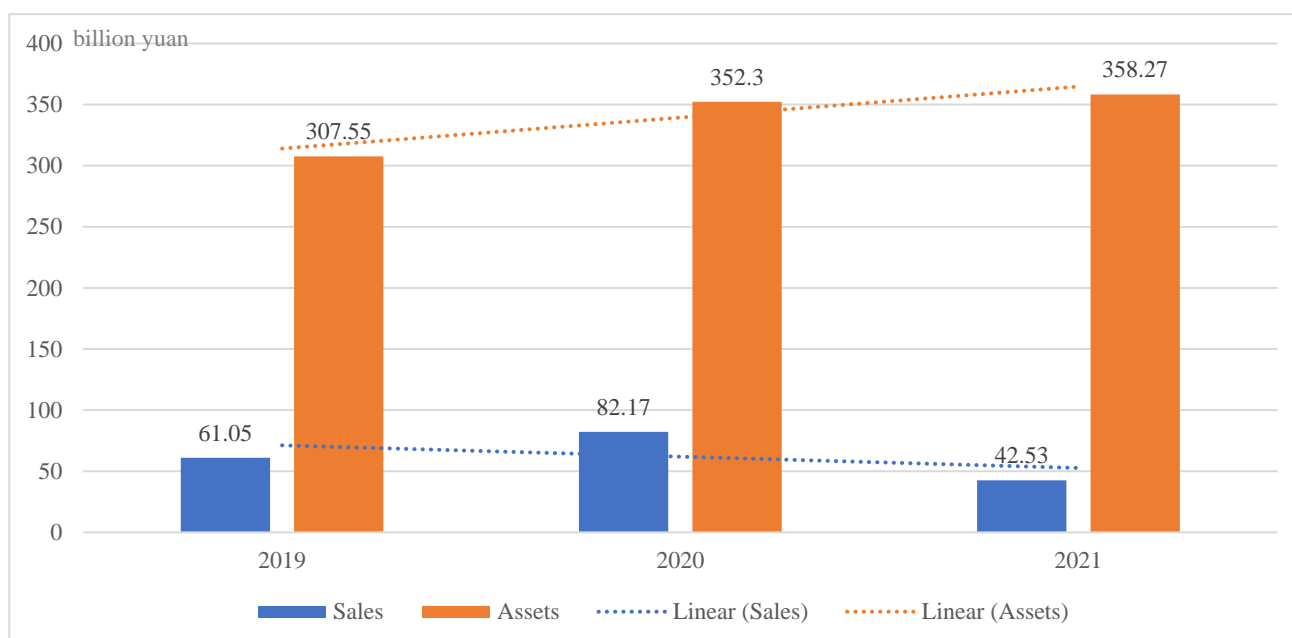


Fig. 6 A Dramatic Plunge in Sales from 2020 to 2021 Source: Wind.

To sum up, expansive companies are usually with features of high leverage ratio, high asset turnover ratio and high reliance on financing. This round of contractions in 2020 and 2021 specifically aims at cracking down on private companies with features above. As the real estate macro control becomes more stringent in recent years, rapid expansion strategy by raising leverage and asset turnover can be no longer feasible. Private firms need reforms for future development.

4. Outlook for Real Estate Development in Next Three Years

4.1 A Turning Point in Late 2022

From January to November of 2022, the year-on-year growth rate of investment in real estate development decreased from 3.7% to -9.8% based on data from Wind, which is the second lowest level historically. China's economy was hugely hit, too. The year-on-year growth rate of GDP was 4.8%, 0.4% and 3.9% from the first quarter to the third quarter of 2022 respectively. Until the beginning of November 2022, NAFMII firstly proclaimed that some private developers are supported for bond financing with over 250 billion yuan and even more. This news was inspiring that it brought a silver-lining for private real estate firms.

Immediately on November 14, presale funds can be conditionally withdrawn by developers of high quality under the guarantee of commercial banks [21]. It mitigated developer's pressure of fund shortage and made sure the unfinished buildings could be completed in time for buyers. Besides, PBC and CBIRC jointly released "A Notice on Financially Supporting Steady and Sound Development of Real Estate Industry" on November 23, which involves 16 specific measures for banks to provide financing for developers of high quality. It also alleviated developers' burden from the loan concentration restrictions [22].

Moreover, Huiman Yi, chairman of China Securities Regulatory Commission (CSRC), declared on many occasions that some property firms could be supported on equity financing, both public and private, home and abroad [23, 24]. It was influential because China's real estate firms had not been allowed for equity financing for 12 years based on the policy No. 10 in 2010 [25]. Not only could developers of high quality benefit from this, but also firms in debt crisis could find a way out. In light of these positive news, the darkest hour of China's real estate industry is gone and a turning point is coming around. More positive news were coming up from the Central Economic Work Conference, which was held on December 15 and 16 in Beijing. It provided a general outlook for 2023 economic work with stress on economic recovering, demand expanding, confidence boosting, high quality development and etc. It is likely to be an expansionary year of 2023.

4.2 Outlook for the Next Three Years from 2023 to 2025

The Five-Year Plan for National Economy and Social Development (the Five-Year Plan hereinafter) derived from planned economy and became popular in many countries in mid-20th century. The Five-Year Plan was established as an important means for a country to intervene and control the national development [25]. China has been making the Five-Year Plan since 1953. By comparing the 13th Five-Year Plan and the 14th Five-Year Plan, main ideas for future real estate development are summarized as follows. Firstly, the housing market should continue to develop under the principal of houses is for living not for speculative investment. Secondly, government regulation will be further strengthened with an aim to stabilize land price, house price and expectation. Thirdly, with regard to the new urbanization, counties should be further explored and be improved to increase people's life quality. In addition, the regional economic layout covers city clusters of high quality, for instance, Beijing-Tianjin-Hebei city cluster, Yangtze River Delta city cluster and Guangdong-Hong Kong-Macao Greater Bay Area. The word of "high quality" appeared 50 times in the document of 14th Five-Year Plan compared with 8 times in the 13th Five-Year Plan.

Overall, it is unlikely to have another round of substantial contractions in real estate industry since only three years are left in the 14th Five-Year Plan for economic growth. From the demand side, it is expected to have a steady growth in housing price with the transition year of 2023 for confidence recovery. For the key areas to develop, first and second tier cities with net population inflow could be mainly focused on. City clusters mentioned above can be covered, too. Besides, although the housing market is at a turning point, it does not mean it will soon be heated again like before. Financial regulations will occasionally intervene in order to prevent potential risks in real estate industry. The role of government control will be enhanced, too. A new picture for property industry is forming with key words of high quality, stabilization and stringent regulations.

5. Conclusion

In summary, this paper discusses the predicament of China's real estate industry in recent years based on contractionary policy analysis in 2020 and 2021. It points out that expansive private firms with features of high leverage ratio and high asset turnover ratio were much more vulnerable to the shock of 2020-and-2021 contractions. However, the toughest time of real estate industry is gone by late 2022 and firms need reforms for future development with strategy changing from rapid expansion to high quality-oriented. Besides, the dominant market share in the property industry is slightly changed from private firms to state-owned firms. It indicates that China's future real estate development will be more influenced by government control and regulations. Nevertheless, this study has the drawbacks of quantitative technique insufficiency and lack of comparison to the expansive firm in case analysis. In the future, by employing quantitative technique, it is more accurate to prove the correlation of expansion features with variable factors. A case study on a less expansive firm can be given as a comparison to Yango Group. Overall, these results offer a guideline for future study on the impacts of macro control policies on expansive private real estate firms.

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