Economic Watch

China | Significant policy turnaround to ensure housing market soft-landing

Jinyue Dong and Le Xia

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2021 housing market regulatory reform has led to tumbling housing prices and real estate activities

Chinese economy has experienced a bumpy V-shape recovery after Shanghai lockdown in 2022, which was significantly dragged by two main risks: “Zero Covid” policy and real estate crash. How to tackle these two main risks becomes crucial to ensure a soft-landing of the housing market and Chinese economy in the coming 2023.

The 2021’s regulatory storms on real estate sector to take use of China’s precious “first-in, first-out” time window and the following housing market crash have brought Chinese real estate market under the limelight again. Started with the authorities’ “Three Red Lines” (Table 1) to curb housing developer’s disordered capital expansion and “Two Red Lines” on banks’ lending behavior, Evergrande crisis in 2021 quickly spilled over to other private-owned Chinese developers, leading to a series of interlocking reactions of significantly dipping land sales, housing investment and housing sales etc. These slump real estate market indicators along the whole real estate value chain, together with housing prices tumbling in most cities, adversely impacted other economic sectors in the upstream and downstream of housing sector, posting threat of China’s growth outlook.

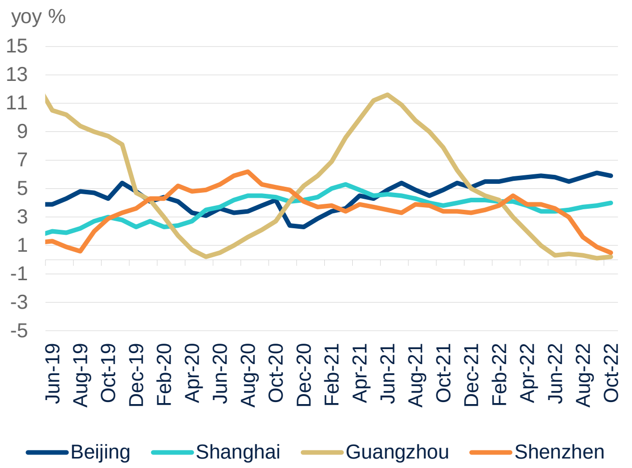
In particular, these clampdown measures on the property market back to 2021 had led to a nationwide housing price slowdown, especially for the four tier-1 cities including Beijing, Shanghai, Shenzhen and Guangzhou as well as other smaller cities. Together with housing price tumbling, trading volume in the housing market has also decelerated, if not frozen, both in the tier-1 cities and nationwide. (Figure 1) In addition, the proportion of China’s major 70 cities which report a year-on-year rise in housing prices has rapidly declined to 10% of the survey sample in the recent October outturn (Figure 2), pointing to a nationwide cooling-down in the property market.

Not only the housing prices tumbled, but also all of the real estate activities along the property value chain have been decelerated. In particular, these indicators, from land sales by the local government, to housing investment, floor space started and completed, buildings sold etc., all registered a large dip in the recent months in 2022. In particular, in October, land purchase dropped to around -50% y/y; new housing sales dipped to around -25% y/y; new housing completed slumped to -40% while real estate investment decelerated to -8.8% y/y ytd. (Figure 3 and 4)

Given that China’s real estate sector takes account of around 30% of total GDP considering both direct and indirect effect, the housing market crash dragged economic growth significantly, together with the strict “zero Covid” policy, deteriorating market sentiments and postponing economic recovery since the lift of Shanghai lockdown in June 1st. (Figure 5-6)

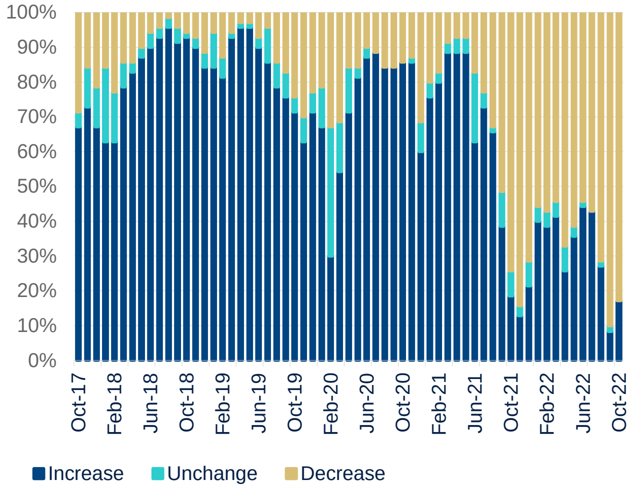
Although we don’t believe it will transform into a systemic risk to China’s economy and financial sector (See our previous Economic Watch: China | Will the fall of Evergrande lead to a systematic breakdown?), a sector-wide structural adjustment is definitely unavoidable.

Figure 1. **HOUSING PRICES SLOWED DOWN IN TIER-1 CITIES**



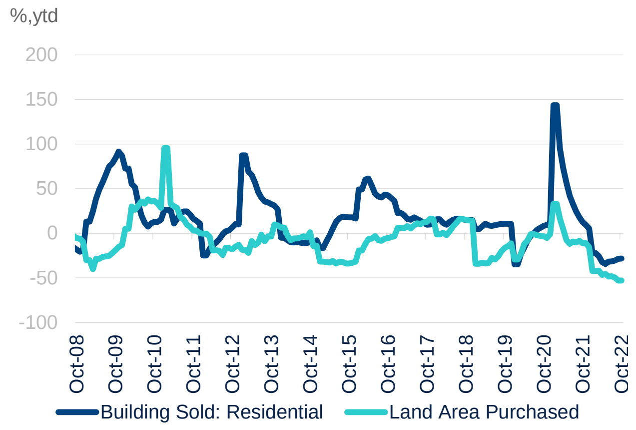
Source: CEIC and BBVA Research

Figure 2. **IN THE 70-CITIES SURVEY,90% CITIES REPORTED HOUSING PRICE SLOWDOWN**



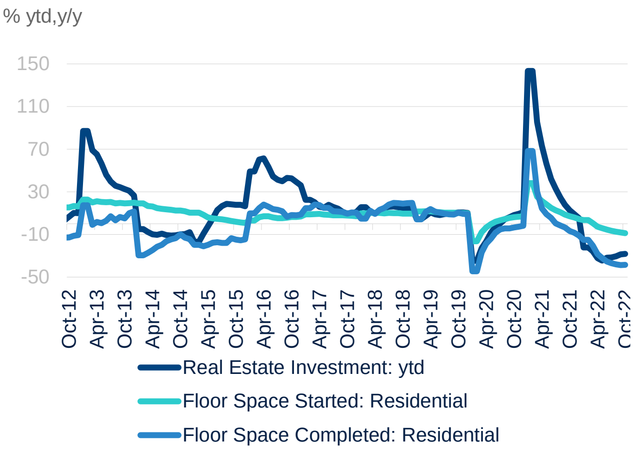
Source: CEIC and BBVA Research

Figure 3. **LAND PURCHASE AND HOUSING SALES DIPPED TO NEGATIVE REGION IN THE RECENT MONTHS**



Source: CEIC and BBVA Research

Figure 4. **HOUSING INVESTMENT ALSO DECELERATED, TOGETHER WITH RESIDENTIAL SPACE STARTED& COMPLETED**



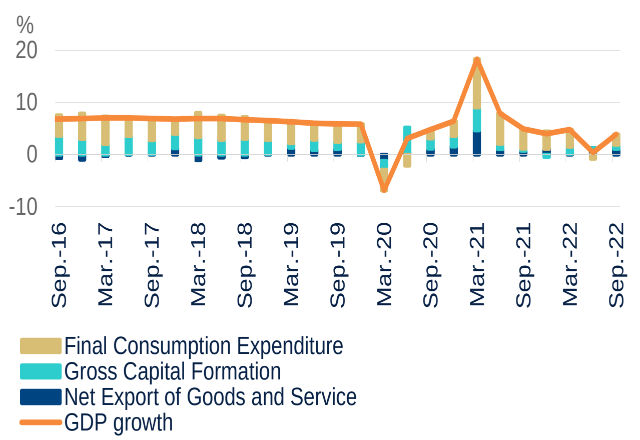
Source: CEIC and BBVA Research

Table 1 THE AUTHORITIES' 2021 REGULATORY MEASURES ON CHINA'S HOUSING MARKET

"Three Red Lines" on real estate developers	(1) A 70% ceiling on liabilities to assets, excluding advance proceeds from projects sold on contract;
	(2) a 100% cap on net debt to equity;
	(3) a cash to short-term borrowing ratio of at least one.
"Two Red Lines" on banks' exposure on real estate sector	(1) The ratio of lending to real estate developers cannot excess 40% for big banks, 27% for medium size banks, 22.5% to small banks and 12.5% for banks in towns and villages.
	(2) The ratio of household mortgage loans cannot excess 32.5% for big banks, 20% for medium size banks, 17.5% to small banks and 7.5% for banks in towns and villages.

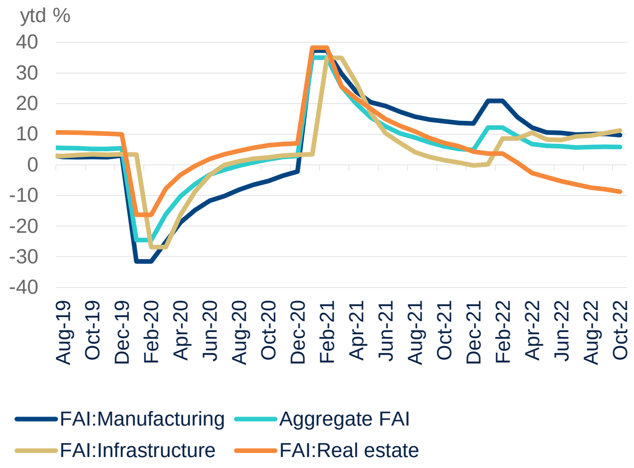
Source: BBVA Research and related Chinese websites

Figure 5. **HOUSING MARKET CRASH SIGNIFICANTLY DRAGGED CHINA'S GDP GROWTH IN 2021**



Source: CEIC and BBVA Research

Figure 6. **REAL ESTATE INVESTMENT ALSO DIPPED TO HISTORICAL LOW SINCE THE PANDEMIC**



Source: Hong Kong Monetary Authority working paper

Real estate policy turnaround: From 2021 regulatory storm to 2022 stimulus

A slumping growth calls for a housing policy turnaround. Since the lift of Shanghai lockdown, the authorities have started to promulgate a series of policies trying to support the tumbling housing market and to secure a real estate sector soft-landing and ultimately an economic soft-landing.

Among all these stimulus measures on housing market, the recently announced "16-Point Plan" on 2022 November 11th which is the sweeping rescue package to salvage the real estate market indicates the largest policy turnaround.

Unlike the previous "smaller" stimulus plans announced since June 2022 which only focus on stimulating demand side such as lowering the long-term mortgage rate, and securing the handover of properties under construction to home-buyers, the new "16-Point" Plan is much more comprehensive, ranging from addressing the liquidity crisis faced by developers to a "temporary" easing of a signature restriction on bank lending, from equally treating private and state-owned housing developers to re-initiating the financial funding channels for them. It marks all-round efforts to bail out the real estate market to secure a "soft landing" after recent data showed some mild improvement.

The new "16-Point Plan" of housing market stimulus include the following components:

- Property development loans for housing developers: lenders should treat developers under state or private ownership equally;
- Home-buying requirements for individuals: to support local governments to set down-payment thresholds and mortgage rate floors;
- Construction companies: to secure continuous and stable fundraising by construction companies;
- Extension on developer borrowings: to extend outstanding bank/trust borrowings due in the next six months by one year;
- Real estate related bonds: to support bond issuance by quality developers and extend repayment on bonds by negotiations;
- Trust Financing: Trust companies are encouraged to provide funding support for M&A, rental properties and retirement houses;
- Special loans for project completion: CDB and NABARD to offer special loans in an efficient and orderly manner;
- Additional support to ensure residential project completion: to provide financial support for residential construction that delays;
- Property project acquisition: to support acquisitions of property projects by stronger developers from weaker rivals; Banks/AMCs can issue bonds for real estate project acquisitions;
- Market-based approaches including bankruptcy and restructuring: AMCs encouraged to deal as bankruptcy administrators and investors on restructuring of residential projects;
- Homebuyers’ mortgages: to encourage banks to negotiate with homebuyers on extending mortgage repayments;
- Mortgage repayment: to protect home buyers’ credit scores;
- Easing a major restriction on banks’ property lending: to temporarily ease restrictions on bank lending to developers;
- Fundraising for acquisitions: to optimize financing rules;
- Lending on rental properties: to ramp up support to companies that own rental property business;
- Diversify fundraising for rental properties: banks can issue bonds dedicated to building rental properties.

Look ahead, whether the above-mentioned “16-Point” Plan could successfully secure a soft-landing of China’s housing sector depends on at least two factors.

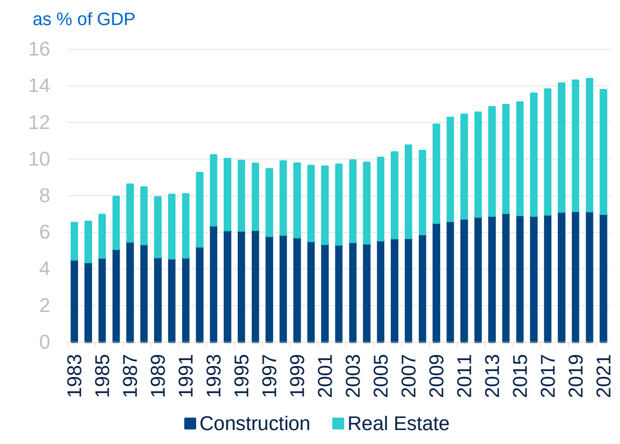
First, it depends on whether the market sentiments could be rebuilt. After all, the recovery of market sentiments at the current stage not only depends on the real estate stimulus, but also depends on the easing of “zero Covid” policy, particularly on when China could completely remove all of the pandemic restrictions. Second, it also depends on whether the housing price could pick up and housing price increasing expectation could be re-formed, as the housing activities along the real estate industrial chain crucially depends on developers and home-buyers’ expectation of housing price going up.

The importance of the property market to Chinese economy

How to avoid hard-landing of real estate sector and to push the economy back to the normal track becomes the most important issue of Chinese authorities after a flurry of regulatory measures in 2021, given the real estate’s large contribution to economic growth, its relevance of the banking sector stability, government fiscal revenue, enterprises and its social implications for households.

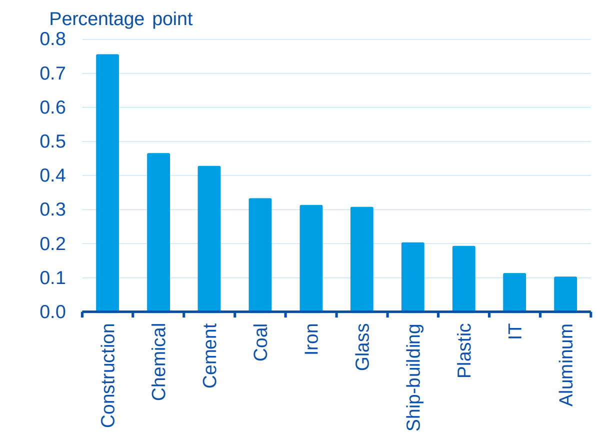
Regarding the aggregate growth, real estate and construction sector contributes to around 14% of the total GDP in 2021 if we only consider the direct effect. (Figure 7) This ratio seems quite comparable with the ratio in the US (16%), Japan (16.9%) and Germany (15.7%). However, if considering its strong linkages to its upstream and downstream sectors (the indirect effect), such as architecture raw materials, housing decorations, housing appliance, furniture, property management etc., real estate related industries are estimated to contribute around 25-30% of GDP. In addition, some research work also shows the significant spillover effect of housing price slowdown to other related sectors. For instance, one standard deviation shock of housing price slowdown will spill over to the slowdown of other sectors, such as construction, chemical, cement, coal, iron etc., ranging from 0.1-0.75 drop of their growth. (Figure 8)

Figure 7. **REAL ESTATE'S CONTRIBUTION TO GDP HAS BEEN INCREASING OVER TIME, BUT DIPPED IN 2021 DUE TO REGULATORY STORMS**



Source: CEIC and BBVA Research

Figure 8. **SPILLOVER EFFECT OF HOUSING SECTOR: THE IMPACT OF 1 S.D SHOCK OF HOUSING PRICE ON OTHER RELATED SECTORS**



Source: Hong Kong Monetary Authority working paper

A natural question to ask is to what extent the economy will be dragged by housing price slowdown, given housing sector's importance to the whole economy. It is indeed a challenging question in the real estate literature given different macro-model set-ups and different understandings of the economic linkages.

In our analysis framework, we are trying to calculate this impact under our framework of real estate sector's linkages with four sectors: government, enterprises, banking sector and households, as it is important to measure to the what extent different sectors including government, banking, enterprises and households are vulnerable to the housing price slowdown.

In the following section, we first of all provide the details of our framework, namely, the exposure of the four economic sectors to housing market, and then, we conduct a stress test to analyze the economic impact of housing price slowdown (by 10% and by 30% in our two scenarios) to these four economic sectors. We make the conclusion based on the stress test result.

Gauging different sectors' resilience to housing prices slowdown

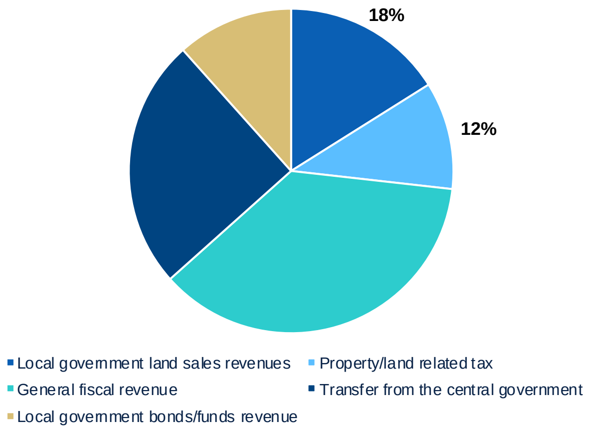
1. Land sales is an important source of local government's revenues, decreasing with housing price

China's fiscal system has long-lasting been famous for its reliance on land sales. Since the real estate reform in 1990s, local governments routinely sold land in the primary land market as an important source of their fiscal revenue. The government-owned land has been an important revenue source and financing tool for local governments.

It is estimated that land sales revenue contributed about 18% of local governments' total revenue while property and land related tax additional contributed to around 12% of total revenue. (Figure 9) Previously, local governments also use land as collaterals, through local government financing vehicles (LGFVs), to leverage more funds to invest in infrastructure projects so as to stimulate the economy. Historically, local governments promoted local economic growth by means of increasing land supply, in particular, local government expanded land supply when the economy slowed down. (Figure 10)

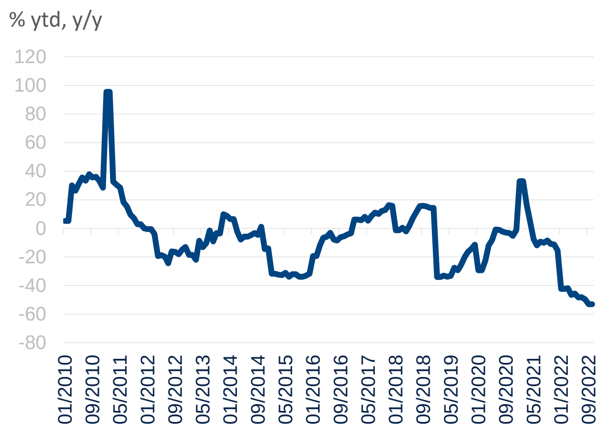
As real estate investment has some time lag behind the housing price, a housing price correction might drag on housing investment and eventually the government's land sales. On top of this direct effect, housing price slowdown also limits local government's collateral value for borrowing. As such, housing price corrections could slow infrastructure investment (as the local government has much less land sales revenues than before) at the local government level and therefore weigh on growth.

Figure 9 **PROPERTY AND LAND RELATED REVENUE CONTRIBUTES AROUND 30% TO LOCAL GOVERNMENT'S TOTAL REVENUE**



Source: CEIC and BBVA Research

Figure 10 **COUNTER-CYCLICALLY, LOCAL GOVERNMENT EASED LAND SUPPLY WHEN GROWTH SLOWED**



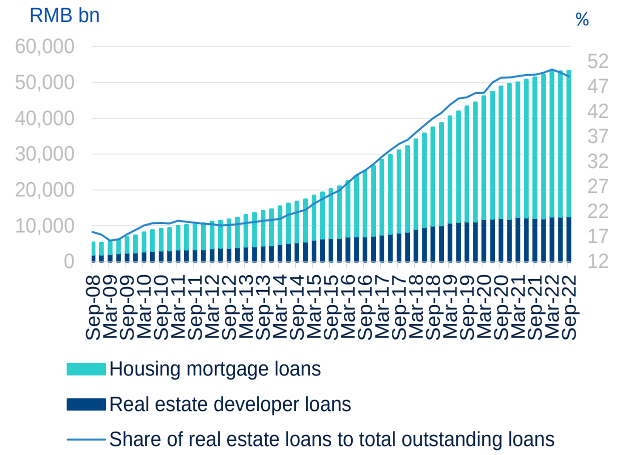
Source: CEIC and BBVA Research

2. Banks' exposure on housing sector has been increasing over time

China's banking sector has a very large exposure to the real estate sector. In particular, mortgage loans to households and developer loans jointly accounted for around 29% to banks' total outstanding loans in 2020. (Figure 11) If we consider banks' holding of the property related corporate bonds, shadow credit exposure as well as non-property loans collateralized by property, they contribute to around 46.2% of banks' total loans and 21.2% of banks' total assets. Among all kinds of housing related loans, banks' largest exposure is housing mortgage.

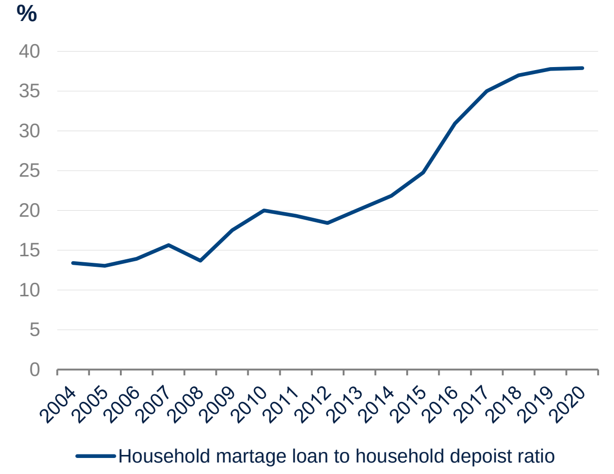
However, the risk of housing market slowdown on the banking sector seems to be limited at the current stage. Banks have a strict requirement for minimum down payment of housing mortgage, most of time at 30% of the housing value. Meanwhile, household's mortgage loan to household deposit ratio, although increasing in the recent years to around 37%, is still low compared with other countries, indicating that housing mortgage can be covered by a small fraction of household deposits. (Figure 12) Although banks' lending to real estate sector has been rising over time, the related risks are still manageable. On the other hand, due to the authorities' continuous efforts to crackdown shadow banking activities, the exposure to the shadow banking sector could have diminished over the past few years.

Figure 11 SHARE OF REAL ESTATE RELATED LOANS TO BANKS' TOTAL LOANS HAS INCREASED OVER TIME BUT ALSO DROPPED IN 2021-2022 DUE TO REGULATION



Source: CEIC and BBVA Research

Figure 12 HOUSEHOLD MORTGAGE LOAN TO HOUSEHOLD DEPOSIT RATIO HAS INCREASED BUT REMAINS MANAGEABLE



Source: CEIC and BBVA Research

3. Housing market's influences on enterprises

China's spectacular real estate boom in the past decade might have some deep implications for resource allocation of the corporate sector as well. In particular, firms could increase their investment in properties during booming years to gain profits even these activities are unrelated to their main business. In addition, banks may be also influenced in deciding to allocate credit to firms (depends on the amount of the properties they have) given that properties are collaterals favored by banks during the housing boom.

Table 2 ENTERPRISES' EXPOSURE TO REAL ESTATE (All listed firms excluding financial institutions and real estate firms)

Country	Variable	Period	Mean	Std Dev	10th percentile	Median	90th Percentile
Japan	Land value/Total asset	1985-1990	19.3%	11.9%	6.5%	17%	35%
	Land value/Total Sales	1985-1990	27.30%	28.20%	6.90%	19.90%	53.80%
China	Land value/Total asset	2013-2015	2.60%	5.60%	0.10%	0.80%	6.50%
	Land value/Total Sales	2013-2015	7.30%	26.80%	0.10%	1.50%	13.50%
China	Land value/Total asset	2016	2.40%	6.3%	0.06%	0.6%	5.2%
	Land value/Total Sales	2016	10.4%	73.6%	0.1%	1.2%	12.6%
China	Land value/Total asset	2020	1.7%	10.6%	0.08%	1.1%	9.66%

Source: Serdar Dinc and Patrick M McGuire (2004), WIND, BBVA Research

According to the listed firms' financial statement, Chinese firms' aggregate land value to total assets was averagely around 2.6% during 2013-2015, and it marginally decreased to 2.4% in 2016 and further declined to 1.7% in 2020 due to the tightening regulations on housing sector in the recent years. Land value to gross sales ratio was around 7.3% during 2013-2015 and significantly accelerated to 10.4% in 2016. Although these figures are not as high as those of some advanced countries (for instance, in Japan, they are 19.3% and 27.3% respectively even in 1980s, according to the paper of Serdar Dinc and Patrick Mcguire, 2004[1]), it has been increasing over time during the past decades, indicating firms' willingness to involve in the real estate sector. (Table 2)

Two more channels for a real estate boom might affect enterprises as well[2]: First is the collateral channel, which relaxes financial constraints faced by land-holding firms. Given that these firms could always use their properties as collateral to borrow from banks, their leverage ability is strengthened as the housing price increasing. The second is the "crowding-out" channel, as housing market boom may crowd out bank financing to non-land-holding firms. Given that those firms might be efficient in terms of business operations etc., this crowding-out effect makes distortions on resource allocation in China.

Altogether, given the firms' behavior to be more involved in the housing market during the housing price boom, the current housing price slowdown due to the authorities' tightening measures will definitely influence these firms' balance sheets from an opposite side.

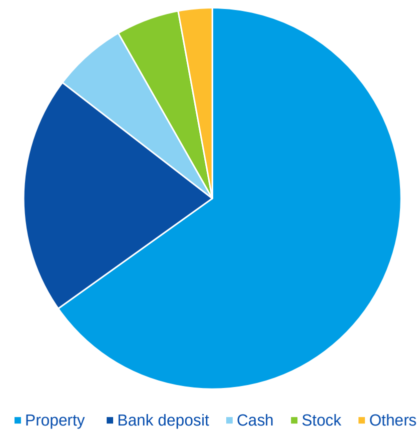
4. Housing is the most important asset for Chinese households

Housing has become an important asset for Chinese household, especially after the 1998 housing reform that the authorities stopped welfare housing distribution for free. Among the other assets, in 2020, housing contributes around 70% of household's total assets' increasing, following which is the financial investment that takes around 21.2%. (Figure 13) In particular, the household survey from Southwest University of Economics and Finance (CFHS survey) also points that in Beijing and Shanghai, the share of housing to household's total assets even reached 85%. By contrast, this ratio is only 36% in the United States. Thus, any fluctuation of housing price in China will lead to a significant change of household's total wealth, and through wealth effect, ultimately influencing household's economic behavior.

In addition, the total market value of China's residential properties has been increasing quickly in recent years. And the price increasing of residential properties has surpassed the disposable income increasing significantly. Thus, wealth effect of housing for household becomes large. (Figure 14) When the market expects housing price increasing in the future, households will increase their consumption expenditure as they feel like their total wealth is expanding, in order to smooth their lifelong consumption (consumption-smoothing behavior); on the other hand, if the market expects housing price declining, they will consume more cautiously or save more.

[1]: Serdar Dinc and Patrick McGuire (2004), "Did investors regard real estate as "safe" during the "Japanese Bubble" in the 1980s?", Bank for International Settlements, working paper No. 164.
[2]: T. Chen, L. Liu, W.Xiong and L. Zhou (2017), "Real estate boom and misallocation of capital in China", working paper, Peking University.

Figure 13 **ASSET ALLOCATION OF CHINESE HOUSEHOLD, AMONG WHICH HOUSING TAKES MORE THAN 70%**



Source: Survey from Southwest Univ. of Economics and Finance

Figure 14 **THE GROWTH RATE OF MARKET VALUE OF RESIDENTIAL HOUSEHOLD SURPASSED THE GROWTH OF WAGE**

Source: CEIC and BBVA Research

Moreover, in the past years of housing boom, the demand of housing has been largely from the "speculative" households, especially in the tier-1 and tier-2 cities. This speculation behavior on the housing market led to an expansion of household mortgage loans, which increased by 14.8% in 2019 and 11.7% in 2020. The default risk of housing mortgage will be rising if housing price decelerated.

Stress test: the impact of housing price slowdown on four economic sectors

After analyzing the four economic sectors' exposure to housing market, we want to quantitatively assess the impact of housing price slowdown on these four sectors in order to evaluate how resilient of these sectors to housing price drop.

We assume two scenarios: in the first scenario, housing price drops by 10%; while in the second one, housing price drops by 30%. We analyze the influences of housing price drop on the wealth of government, enterprises, banking sector and household based on these sectors' exposure on real estate market. (Table 3) Some background information and assumptions for each sector as below:

Governments: Property and land related revenue contributes around 84% to local government's total revenue (the historical high ratio in the past years), and property and land related revenue reached RMB 8.4 trillion in 2020.

Banking sector: Several transmission channels for housing price decreasing to banks' NPL ratio: (i) housing price decreasing leads to banks' assets decline; (ii) housing price decreasing indicates the deterioration of housing developers' balance sheet, affecting their ability to pay back; (iii) housing price decline leads to the value of banks' housing collateral value shrinking. Our estimation of housing price decreasing's influence on banking sector's NPL ratio is based on the VECM stress test model developed by Ping An Securities Research Department. (see Footnote 3 in Table 3)

Enterprises: In 2020, total book value for real estate investment by enterprises (excluding banking and real estate firms) was RMB 391 billion; Given the current average PB ratio for non-finance non-property listed firms is at 2.51, housing price decreasing will lead to 2.51 times of real estate investment loss transiting for stock market value evaporation, which is RMB 981.4 million.

Household: In 2020, China's household assets per capita is RMB 0.26 million; among which, 70% is housing asset (RMB 0.18 million).

Table 3 **Stress test of housing price fall on four different sectors**

	Scenarios	
Sectors	**Housing price decreases by 10%**	**Housing price decreases by 30%**
Government	Local government revenue decreases by RMB 0.84 trillion, indicating it has RMB 0.84 trillion credit gap to maintain the current fiscal expenditure.	Local government revenue decreases by RMB 2.52 trillion, indicating it has RMB 2.52 trillion credit gap to maintain the current fiscal expenditure.
Banking sector	Banks' NPL increased from 1.92% at end-2020 to 2.07% after one year and increased to 3.36% after three years.	Banks' NPL increased from 1.92% at end-2020 to 2.39% after one year and increased to 6.16% after three years.[3]
Enterprises	Stock market value will evaporate RMB 98.14 bn; book value of enterprises' real estate investment will decrease RMB 39.1 bn.	Stock market value will evaporate RMB 294.4 bn; book value of enterprises' real estate investment will decrease RMB 117.3 bn.
Household	Household wealth per capita decreases by RMB 18 thousand; Aggregate household wealth decreases by RMB 25.2 trn.	Household wealth per capita decreases by RMB 54 thousand. Aggregate household wealth decreases by RMB 75.6 trn.

Source: BBVA research

[3] More detailed analysis of this stress test about housing price slowdown on banking sector could be found in Zhang Ming, W Wei and X. Chen (2017), “Will housing price slowdown lead to banking crisis”, Ping An Securities Research Department report, Chinese version

Conclusion

After analyzing the linkages between property market and the four key economic sectors namely banking, government, enterprises and household, together with the macro economy as a whole, we do not believe the ongoing housing market slowdown led by a flurry of tightening regulatory measures back to 2021 could lead to an economic hard-landing or recession in 2023. Given the powerful market intervention ability of Chinese authorities on land market, housing market and credit market, more importantly, the awareness of the economic slowdown dragged by housing market crackdown followed by plenty of policy room to ease the “Zero Covid” policy, as well as the ongoing stimulus on housing sector, the nationwide housing market collapse is almost not possible.

On the other hand, based on the investigation of the four sectors’ exposure on housing market and their resilience on housing price drop by stress test (Table 3), we believe that household sector is in particularly vulnerable to the price adjustment in the property sector which may lead to aggregate household wealth decreases by RMB 25.2 trillion (the book value) if housing price drops by 10% and by RMB 75.6 trillion if housing price drops by 30%. Thus, the authorities should be very cautious to unveil the property tax in the future at the national level as it’s important not to exacerbate the sentiment of households.

However, although a nationwide housing market collapse and the so-called “Lehman Moment” might be circumvented, some important caveats are noteworthy:

First, sentiment matters. The ongoing housing policy turnaround, namely, the “16-point” Plan to avoid real estate hard-landing, is still lagged behind the stimulus measures back to 2015 while the easing of “zero -Covid” policy is still slower-than-expected. That means, without the deluge of massive stimulus on real estate to help rebuild the housing price increasing confidence, whether and how long the ongoing housing stimulus could bring the housing market out of quagmire is still questionable. 2023 might witness some mild recovery, but the long-term robust recovery needs more stamina ahead.

Second, in terms of economic growth, housing market crash led by regulatory tightening measures in 2021 will certainly drag on growth, given property sector’s complicated linkages to other sectors and its more than 1/4 contribution to economic growth. This gives the authorities a long-lasting challenge to balance a decent growth figure and financial stability, as Chinese business cycle has been driven by real estate cycle for the past decades.

Third, the authorities have been trying to take use of China’s new growth model, particularly the development of green economy and high-technology to compensate the housing market slowdown and to break the previous “housing driven business cycle”, however, whether and to what extent these “new economy” could offset the deceleration of “old economy” is still challenging ahead.

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CONTACT DETAILS:
BBVA Research: Azul Street. 4. La Vela Building – 4th and 5th floor. 28050 Madrid (Spain).
Tel. +34 91 374 60 00 y +34 91 537 70 00 / Fax (+34) 91 374 30 25
bbvaresearch@bbva.com www.bbvaresearch.com