

Citi Global Wealth Investments Asia Strategy Bulletin

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China's Mortgage Boycott: A Lehman Moment (Again) or A Tempest in a Teapot?

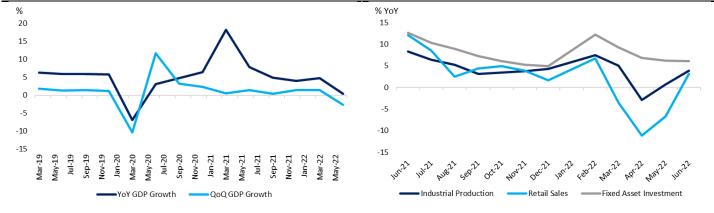
- China's economic recovery is underway after the prolonged lockdown of Shanghai. However, the property sector and the banking system face greater risks, as mortgage boycotts or strikes have erupted in 80 cities across the country, threatening the best assets held by Chinese banks on their balance sheets. Indeed, some observers have started to label this emerging property market risk as China's Lehman Moment...again.
- The potential impact on financial and social stability has already accelerated the
 policy response, with a potential grace period being proposed for borrowers, as well
 as proposals for more coordinated financial and administrative policies to speed up
 project completions.
- The size of the mortgage boycotts remains relatively small at this stage. Assuming 9% of housing units pre-sold in the past two years are at risk of payment strike, mortgage NPLs could quadruple to 1.4% of total mortgages. Still, this would add just 0.3% to the overall NPL ratio, which was reported at 1.7% as of March. However, if allowed to fester, the potential damage to the banking system could be large.
- We believe China has both the policy tools and the political will to keep this tempest of mortgage strikes in a teapot. In particular,
 - Halt the implementation of the 'three red lines'
 - Instruct local governments to take a decisive role to accelerate the restructuring of defaulted developers, and deploy the pre-sale funds to complete the troubled property projects
 - Continue to manage expectations by removing factors that could undermine the recovery of the property market.
- As a result, we believe the situation is manageable, as some of the needed measures are already being taken. In fact, the mortgage strikes may have accelerated a part of the stimulus program that had seen the least progress. We maintain our view that the episode of mortgage strikes won't derail China's cyclical recovery in the second half.

Recovery is underway, but the property sector worries have worsened

Despite a QoQ growth contraction of 2.6% in Q2, China averted a negative GDP growth YoY with a modest 0.4%. It is the second lowest quarterly growth since the early 1990s. After the re-opening of Shanghai, June monthly economic activity data have shown a broad-based recovery with industrial production and retail sales rebounding strongly, while fixed asset investment growth remained steady (**Figure 1 & 2**).

However, property sector worries deepened. Property investment growth continued to decline, registering a contraction of 5.4% in H1 (**Figure 3**). While the sharp fall in property sales eased somewhat in June (**Figure 4**), mortgage boycotts or strikes have erupted in 80 cities across the country (as of July 15), potentially threatening the best assets held by the Chinese banking system. Some have started to label the emerging property market risk as China's Lehman Moment again¹. We believe the ongoing crisis, given its social stability implication leading to the 20th party congress, will likely be dealt with decisive policy interventions ahead, and we don't think this event would derail China's economic recovery in H2.

Figure 1: Despite a QoQ contraction, China's Q2 GDP Figure 2: The June IP and retail sales rebounded, while growth YoY averted a contraction fixed asset investment remained steady



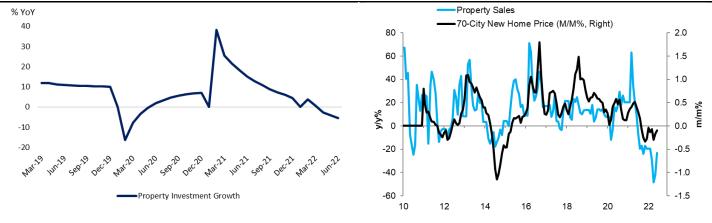
Source: Haver Analytics, as of July 2022

Source: Bloomberg, as of July 2022

Figure 3: Property investment growth further contracted in June

Figure 4: Property sales recovered considerably, but property prices continued to fall

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Source: Haver Analytics, as of July 2022

Source: Haver Analytics, as of July 2022

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¹ See "Is China Stumbling Into Its Own Mortgage Crisis?" by Shuli Ren, Bloomberg Opinion, July 14 2022.

What are the reasons behind the mortgage boycotts?

China's property developers have long adopted a practice of pre-sales, first invented in Hong Kong, as a means to eliciting interest and commitment from potential home buyers, while also advancing payments to finance new projects. When developers are well-funded with a booming property market, pre-sale properties have little risk and home buyers can also enjoy property valuation gains even before their properties are being completed.

However, when developers are liquidity constrained or facing solvency risk, they often fail to deliver the promised properties. The home buyers locked in pre-sale contract may lose their down payments. For those who have already started paying their mortgages, their losses are even bigger given the housing debt remains the same, but the value of the properties dropped.

While anecdotal incidents took place before², the current scale and the widespread nature of mortgage boycotts or strikes have been unprecedented for the following reasons, thus requiring urgent policy attention.

- The developer financing difficulties are worsening. As shown in **Figure 5**, 30 large developers have defaulted, either in the onshore RMB credit market or in the offshore USD bond market. Given their total debt at around RMB30.32tn (USD4.5tn), a further deterioration of their financial conditions will not only have social stability implications owing to their failure to deliver pre-sale properties, but also pose a significant risk to the health of China's banking system. The aggressive push by regulators to impose three red lines³ on developers have caused the problem. This policy would need to be relaxed in order to avert crisis.
- China's property market has already been in an unprecedented slump, and property prices have started to fall as well. Citi Research estimates that out of 35 residential construction projects that failed to deliver the property to home buyers, their property prices may have dropped by 10-15%⁴.
- Some pre-sale home buyers have lost their jobs recently owing to the Covid lockdowns and economic downturn. The unfinished property gives them a good excuse to walk away from their pre-sale mortgage contract.

Figure 5: 30 large property developers have defaulted so far, and their overall debt liabilities are huge

Developer	Liabilities (bil)	Default yr	Developer	Liabilities (bil)	Default yr	
Evergrande	2000	2021	Contemporary real estate	80	2021	
Sunac	1000	2022	022 Yuzhou		2019	
WTO	400	2022			2022	
China Fortune Land Development	260	2020	Junfa	120	2022	
R&F	300	2021	Fusheng	70	2019	
Sunshine City	350	2021	Tahoe	200	2019	
Zhengrong	200	2022	Dafa	30	2022	
Blu-ray	200	2021	Field Property	20	2021	
Longguang	200	2022	Sunshine 100	40	2021	
middle beam	200	2022	Derun Chuangzhan	2	2021	
Kaisa	230	2021	Baoneng Real Estate	200	2021	
Aoyuan	250	2021	Guangzhou Yuetai	8	40 2021 2 2021 200 2021	
Xiangsheng	150	2022	Guangyao Real Estate	10	2021	
Xinli	100	2021	Zhonggeng Real Estate	30	2021	
Fantasia	60	2021	Zhuoda Estate	30	2018	

Source: Bloomberg and Citi Research, as of July 2022

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² For example, a case in Jiaxin, Zhejiang province in 2022 and a case in Huizhou, Guangdong provinces in 2018, home buyers won legal cases to stop mortgage payments until developers deliver the property.

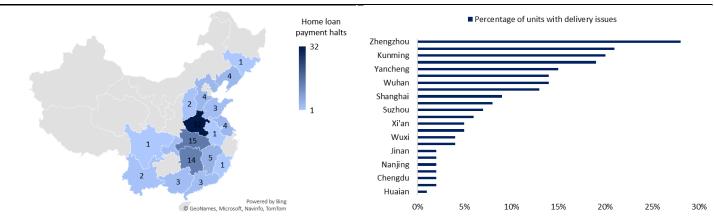
³ Three red lines refer to: 1) The asset-liability ratio after deducting advance receipts shall not exceed 70%; 2) The net debt-to-debt ratio shall not exceed 100%; 3) The cash short-term debt ratio shall not be less than one.

⁴ See "Assessing Residential Mortgage Non-Repayment Risk" China Property and China Banks, Citi Research, 13 July 2022.

How big is the problem?

As of July 12, there are 18 provinces and 47 cities involved in the mortgage boycott around China, and among them, the Henan province has the most problem with 32 halted housing projects experiencing mortgage strikes (**Figure 6**). The city of Zhengzhou—Henan's provincial capital—has the highest ratio, among major cities, of around 28% of unfinished projects halted due to developer funding problems (**Figure 7**).

Figure 6: Mortgage strikes are widespread across Figure 7: Percentage of units with delivery issues in 12 China cities



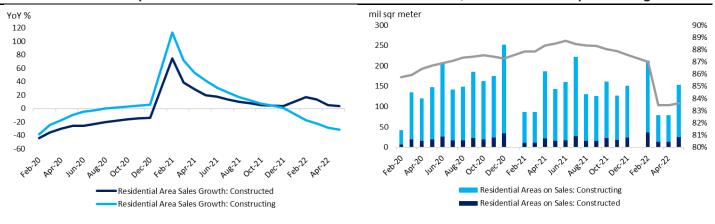
Source: CRIC, as of July 2022

Source: Bloomberg, as of July 2022

Meanwhile, the number of potentially unfinished housing projects could become larger and will likely increase rapidly in the near future, short of urgent policy interventions from both government and financial institutions. As shown in **Figure 8**, the sales growth of residential buildings under construction have fallen substantially below that of finished buildings since the end of 2021. Given the ratio of pre-sale floor space is over 80% of total new residential floor space sold (**Figure 9**), the current mortgage strike could depress new home sales further, which would worsen the developer liquidity conditions further and could lead to additional defaults.

Indeed, this observation is also validated by investigating the financing sources of developers (**Figure 10**). Property sales constitutes the **largest source** of developer funding, at over 42% of the total. Thus, the slower in property sales, the more liquidity constrained developers will become. This could easily run into a vicious and downward spiral for developers and mortgages, which threatens the best assets in the banking system.

Figure 8: Sales of unfinished properties dropped much Figure 9: Pre-sales account for over 80% of total new more than those completed residential sales, critical for developer funding

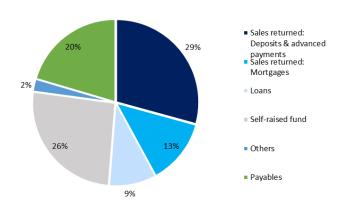


Source: Haver Analytics, as of July 2022

Source: Haver Analytics, as of July 2022

Figure 10: Pre-sales amounted to 29% of financing structure of property developers in 2021

Figure 11: Percentage of mortgage loans in 11 listed banks involved in the mortgage strikes



	Personal housing loan balance (bil)		Percentage of bank's total mortgage loan
Industrial Bank	1121.169	1600	0.1427%
Bank of Nanjing	83.2	21.14	0.0254%
Bank of Jiangsu	244.6	31	0.0127%
ABC	5340	660	0.0124%
Ping An Bank	282.919	31.8	0.0112%
Minsheng Bank	591.039	66	0.0112%
ICBC	6360	637	0.0100%
Bank of Communications	1500	99.8	0.0067%
Postal Savings Bank	2000	127	0.0064%
China Merchants Bank	1374.406	12	0.0010%
Everbright Bank	-	65	0.0010%

Source: Haver Analytics, as of July 2022

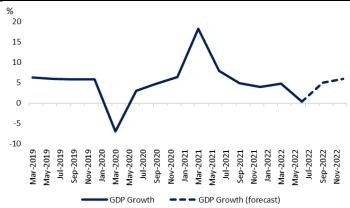
Source: Banks' Official Websites and Citi Research, as of July 2022

How big an impact on the banking system at this stage?

Chinese banks have reacted quickly by announcing their exposures to those residential projects already experiencing mortgage strikes, but these appear grossly underestimated. From the announced numbers, the Industrial Bank has the highest percentage of mortgage loans experiencing mortgage strike, at 0.14% of its total mortgage loans or at a value of RMB1.6bn, while the other banks seem to have much smaller exposure to mortgage strikes relative to their mortgage portfolio (**Figure 11**). Among the RMB38.3tn in total mortgages outstanding in the Chinese banking system, the exposure to mortgage boycotts is tiny, at only **0.008%**.

Figure 11: Property assets in banks' balance sheet at Figure 12: The mortgage boycott incidence won't derail the end of 2021 China's H2 recovery





Source: Bloomberg, as of July 2022 Source: Bloomberg, as of July 2022

But the potential impact on the banking system can be much larger than reported by the individual banks. Based on new mortgage loans extended in 2020 (RMB2.9tn) and 2021 (RMB3.2tn), and assume 9% of housing units constructed in 2020-2021 are experiencing construction halt owing to developer liquidity or solvency, Citi Research estimates that potentially RMB561bn of mortgages are at risk of payment strike⁵. As a result, the mortgage NPL ratio could rise to 1.4% of the RMB38.8tn in total mortgages, up from the current mortgage NPL ratio of 0.35%. Together with the 0.6% exposure to high risk developer loans in the banking system, the overall NPL ratio may rise to 2.6% of the RMB212tn loan book, from 1.7% reported in March 2022.

⁵ See "Assessing Residential Mortgage Non-Repayment Risk" China Property and China Banks, Citi Research, 13 July 2022.

Do authorities have the policy tools to keep the tempest of mortgage strikes in a teapot?

We think so but this also requires decisive policy changes.

- First, the 'three red lines' policy will need to be relaxed. The aggressive enforcement of the 'three red lines' policy since last year has pushed many reputable developers to either a liquidity crisis or a solvency crisis. This policy will then need to be relaxed to encourage banks to resume normal lending to the property sector and allow developers to tap capital markets for funding as well. Once developer funding is restored, the unfinished projects would be more likely to be completed. The mortgage strike should also end. Indeed, the banking regulator signaled on July 18 that banks would be encouraged to fund project completions.
- Second, China will need to change the firm-led approach to engage in property sector restructuring. While
 a Lehman moment scenario can be ruled out, the slow debt restructuring among those weak developers has been
 impeding a quick recovery in the property market.
 - The PBoC, together with CBIRC and CSRC, has taken a firm-led approach to restructuring troubled developers. Banks and the bond market have offered merger and acquisition (M&A) restructuring financing for SOE developers and some large and healthy private developers to purchase the assets from weak private developers.
 - However, owing to the opaqueness of the true liabilities of weak and defaulting private developers, the M&A process has been painfully slow so far. Without new funding from restructuring, many private developers' liquidity problems deteriorated into a solvency trap. More developers chose to default on their onshore RMB and offshore USD debts.
 - The rapid deleveraging process has also forced healthy developers to cut new investments and land purchases. This then led to a drop in fixed investment, while also constraining China's growth potential. The longer the restructuring process takes, the slower the recovery of the property market will be. During the process, the collateral value of developers will continue to decline.
 - To address this problem, the central and local governments will need to play a decisive role in accelerating
 the restructuring process so that the M&A and restructuring process can proceed quickly. The central
 government needs to more clearly state the intentions and goals of policy.
- Third, pre-sale fund locked up by local government will need to be distributed and deployed to help complete the halted property projects. One of the triggers for the mortgage strike was that some pre-sale funds have to misappropriated for other purposes for released to developers before actual project completion, which had been common practice during the good times. Some local governments have become very reluctant to release pre-sale funds as a result. However, this problem could be addressed with local government monitoring of payments and construction progress, given the urgency to deliver of residential property projects.
- Forth, relax other property curbs and remove the uncertainties facing China's property sector in the medium term, including the property tax trial. To boost property demand, local government will need to remove their property purchase restrictions further. In such a severe property downturn, the Ministry of Finance should also announce further delay to the property tax trials by another few years to manage market expectations (Figure 13).

Figure 13: China - Progress on Property Tax Legislation

Time	Event	Key Takeaways
Mar 5th	NPC gov working report	The property tax legislation should be accelerated.
Mar 7th MoF NPC media press	Vice Minister confirmed that at present, the NPC Standing Committee Budget Working Committee, MoF and	
IVIAI / LII	wai 7tii Wor wee media press	other relevant parties are working hard to draft the real estate tax law.
Jun 16th Ministry of Natural Resources	The information management platform for real estate registration has been unified nationwide, paving way	
Juli 10tii	Willistry of Natural Resources	for property tax reform.
Jul 5th	State council	The notice on state council supervision champion stressed the supervision on property registration.
Jul 16th	NBS media pres. on 1H economic	On property market development, gov't will quicken implementation of property tax relevant measures.
Sep 7th	13th NPC legislative agenda	The property tax legislation is planned to submit for approval to the 13th NPC Standing Committee

Source: Bloomberg and Citi Research

In conclusion, we think the governments at both central and local government levels have necessary policy tools at their disposal and also the political will to take speedy actions to avoid the unpleasant outcome of further deterioration of the mortgage strikes.

Many signals of policy action have already emerged over the past week, such as those surrounding the grace period and the associated financial help to complete projects. Given the Q2 politburo meeting will usually open after Q2 GDP data release in the second half of July, we think the mortgage boycotts will be deemed to be an important meeting agenda. It is highly probable that the authorities will take what it takes to keep the tempest of mortgage boycotts into a teapot. Thus, despite rising market concerns, we maintain our view that the episode of mortgage boycotts won't derail China's cyclical recovery in H2 (Figure 12).

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Upper medium grade (Strong)	Α	А	Α	
Medium grade	Baa	BBB	BBB	
Not Investment Grade				
Lower medium grade (somewhat speculative)	Ва	ВВ	ВВ	
Low grade (speculative)	В	В	В	
Poor quality (may default)	Caa	CCC	CCC	
Most speculative	Ca	CC	СС	
No interest being paid or bankruptcy petition filed	С	D	С	
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Mortgage-backed securities ("MBS"), which include collateralized mortgage obligations ("CMOs"), also referred to as real estate mortgage investment conduits ("REMICs"), may not be suitable for all investors. There is the possibility of early return of principal due to mortgage prepayments, which can reduce expected yield and result in reinvestment risk. Conversely, return of principal may be slower than initial prepayment speed assumptions, extending the average life of the security up to its listed maturity date (also referred to as extension risk).

Additionally, the underlying collateral supporting non-Agency MBS may default on principal and interest payments. In certain cases, this could cause the income stream of the security to decline and result in loss of principal. Further, an insufficient level of credit support may result in a downgrade of a mortgage bond's credit rating and lead to a higher probability of principal loss and increased price volatility. Investments in subordinated MBS involve greater credit risk of default than the senior classes of the same issue. Default risk may be pronounced in cases where the MBS security is secured by, or evidencing an interest in, a relatively small or less diverse pool of underlying mortgage loans.

MBS are also sensitive to interest rate changes which can negatively impact the market value of the security. During times of heightened volatility, MBS can experience greater levels of illiquidity and larger price movements. Price volatility may also occur from other factors including, but not limited to, prepayments, future prepayment expectations, credit concerns, underlying collateral performance and technical changes in the market.

Alternative investments referenced in this report are speculative and entail significant risks that can include losses due to leveraging or other speculative investment practices, lack of liquidity, volatility of returns, restrictions on transferring interests in the fund, potential lack of diversification, absence of information regarding valuations and pricing, complex tax structures and delays in tax reporting, less regulation and higher fees than mutual funds and advisor risk.

Asset allocation does not assure a profit or protect against a loss in declining financial markets.

The indexes are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance.

Past performance is no guarantee of future results.

International investing entails greater risk, as well as greater potential rewards compared to US investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with emerging markets, since these countries may have relatively unstable governments and less established markets and economics.

Investing in smaller companies involves greater risks not associated with investing in more established companies, such as business risk, significant stock price fluctuations and illiquidity.

Factors affecting commodities generally, index components composed of futures contracts on nickel or copper, which are industrial metals, may be subject to a number of additional factors specific to industrial metals that might cause price volatility. These include changes in the level of industrial activity using industrial metals (including the availability of substitutes such as manmade or synthetic substitutes); disruptions in the supply chain, from mining to storage to smelting or refining; adjustments to inventory; variations in production costs, including storage, labor and energy costs; costs associated with regulatory compliance, including environmental regulations; and changes in industrial, government and consumer demand, both in individual consuming nations and internationally. Index components concentrated in futures contracts on agricultural products, including grains, may be subject to a number of additional factors specific to agricultural products that might cause price volatility. These include weather conditions, including floods, drought and freezing conditions; changes in government policies; planting decisions; and changes in demand for agricultural products, both with end users and as inputs into various industries.

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