



CIO Special

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China's property sector: near-term challenges; waiting for opportunities

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05 Overall market outlook

Key take aways

- High debt levels at China's property developers remain a concern, and problems in the high yield (HY) sector have spilled over into some investment grade (IG) issuers.
- However, given a stabilising macroeconomic backdrop and supportive and flexible government policy, we think investment sentiment could improve.
- Opportunities in the Chinese property market remain, particularly as a result of structural longer-term trends, but a highly selective approach as well as risk management are key.

01 Recent sectoral and market trends

Over the past few months, high debt levels at Chinese property developers have been a concern for investors with both direct and indirect exposure to the asset class. Many property developers have been facing liquidity issues, and these are likely to keep market volatility high. Nonetheless, while the Chinese property market does have problems that will take time to fix, we do not believe that the issues would cause an immediate systemic risk.

Problems became more apparent in the last quarter of 2020 with the implementation of the government's "three red lines" controls (financial metrics designed to encourage deleveraging) on Chinese property developers. The "three red lines" included 1) liability-to-asset ratio (excluding advance receipts) below 70%, 2) net gearing ratio of below 100%, and 3) cash-to-short-term debt ratio above 1X. These, along with caps on property lending by the banks, put property developers under pressure. Estimates suggest that around two-thirds of the top 30 real estate developers are still in breach of at least one of the "three red lines". This has led to increased credit risk in the sector with monthly ratings downgrades reaching an all-time high of 72 in October 2021, up from the previous record of 37 in September 2021.

Chinese high yield (HY) spreads have also widened to their highest levels since inception of the asset class in 2009 and are now much higher than the long-term average, as shown in Figure 1. After several years of strong returns, 2021 was a difficult year for this asset class.

Since the real estate sector makes up almost 80% of China's HY market, this has pushed the default rate of the overall China HY segment to its highest since 2015 at more than 8% in the last 12 months. The deterioration is reflected in credit spreads which rose from less than 900 bp to more than 3,000 bp. Credit markets are expecting further defaults to take place in the China HY property sector. Yields on China HY surged to 18.9% compared to only 4.9% for Global HY (see Figure 2). As of mid January, credit markets expected close to a 75% notional default rate for China's HY property sector (see Figure 3).

Chinese real estate companies now account for close to 50% of all global USD-denominated bonds trading at distressed levels (i.e. at a spread of 10 pp above their benchmark).



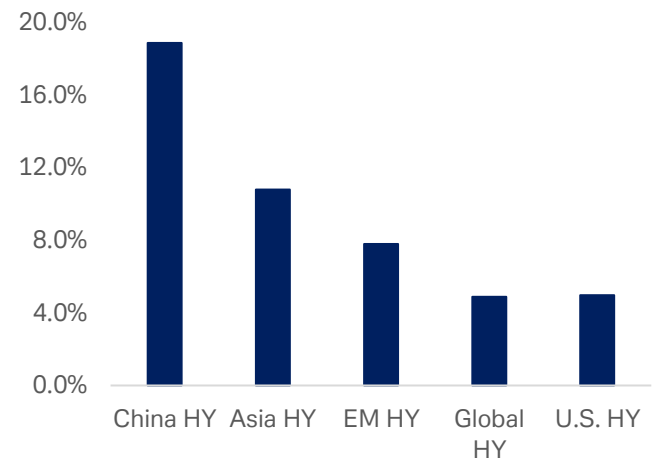
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Figure 1: China HY spreads



Figure 2: HY credit markets' "yield to worst"



Source: Bloomberg Finance L.P., Deutsche Bank AG. Data as of January 25, 2022.

Source: Bloomberg Finance L.P., Deutsche Bank AG. Pricing as of January 2022

This uncertainty is reflected by actual activity in the sector. Home sales by value have declined in the last 6 months and new home prices have declined in a majority of cities. Land sales have shown weakness nationwide due to limited credit availability and the cautious stance of developers. Property investment has slowed due to the uncertain market outlook.

02 What could happen next

Going forward, we believe there is room for property sector consolidation through M&A activity, asset sales and government policy aimed at clearing the market of non-compliant developers.

Much will be dependent on how the "red lines" are interpreted. For example, M&A loans might not be considered as debt within the "red lines" framework. Currently, M&A loans only account for less than 5% of developers' debt. But the intention could be to facilitate state-owned entities' (SOEs) acquisition of assets from developers with liquidity issues.

Looking beyond the intra-sectoral trends, it is worth considering the role of the Chinese property in the broader economy. The property sector has been the key driver of Chinese growth over the past two decades, and accounts for 28% of GDP. Around 40% of household assets are linked to property, and around 40% of bank debt is secured on property. The stability of the property sector is therefore very strongly linked to overall economic stability.

China's CPI inflation has been low, at around 2%, over recent months. While PPI inflation has been higher at above 10%, its transmission to CPI remains limited. This was in sharp contrast to other major economies, where inflation has become a more pressing issue for central banks. For this reason, we think Chinese policymakers could implement more stimulus measures

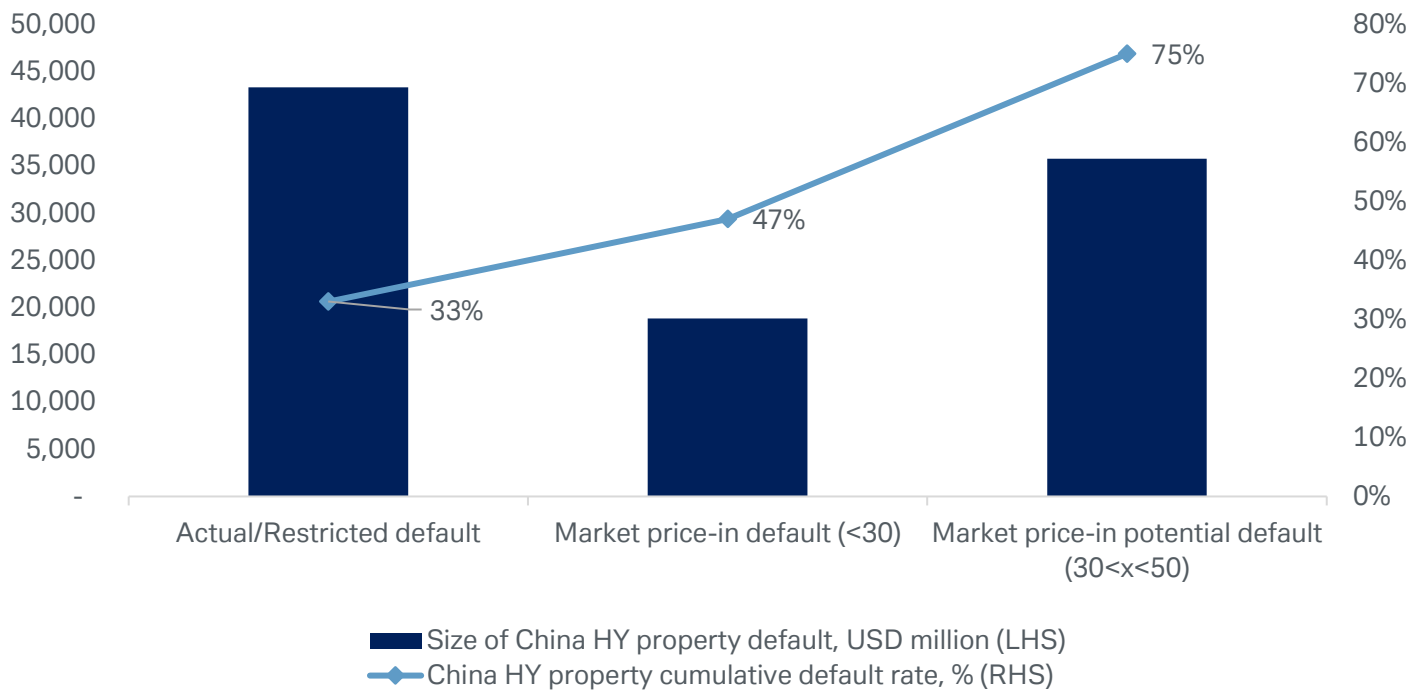
to support the economy in coming months. Fiscal easing will focus on new tax cuts and moderately increasing infrastructure investment. In parallel, monetary policy will focus on boosting credit growth by using various lending facilities to provide low-cost funding to banks.

Having surprised markets by lowering its medium-term lending facility (MLF) and open market operation (OMO) policy rates on January 17, the PBoC delivered a more detailed assessment of the situation at its press conference on January 18 – in general sounding very dovish and pro-growth. It emphasised the need to stabilise expectations and push for faster credit growth, mentioning that "the previous decline in macro leverage gives room for monetary policy easing". On January 20, only 48 hours after the press conference, China's central bank announced the reduction of the 1Y loan prime rate (LPR) by 10 bp from 3.8% to 3.7% as well as a reduction in the 5Y LPR by 5 bp from 4.65% to 4.6% – the first cut since April 2020 when the coronavirus pandemic was at its height in China. In addition, the credit impulse rebounded from very negative in mid-2021 to almost neutral in recent months, in part thanks to a recovery in mortgage lending. Going forward, with the help of PBoC lending facilities and increased government borrowing, credit growth could likely accelerate.

The monetary policy stance has already shifted from tight to accommodative, in our view. However, there might not be any significant loosening of credit to the property sector. The policymakers' overall stance is that "houses are for living, not for speculation". This sentiment will likely shape the way forward and ultimately reduce the importance of the real estate sector in the economy. Some believe that China's real estate sector needs to be much smaller to keep the overall economy healthy and stable, but the economic rebalancing required beyond the property sector seems unlikely to be pursued with vigour over the next few quarters.



Figure 3: Default rates priced in by credit markets for China's HY property sector



Source: Bloomberg Finance L.P., Morgan Stanley Research, Deutsche Bank AG. Data as of January 2022.

Interestingly, the Chinese government is also introducing policies to structurally shift the incentives around holding property. In October, China announced that there would be a roll-out of a pilot scheme of a real estate tax for all properties excluding farms in Shanghai and Chongqing. The direct consequence of the tax is an increase in the cost of holding property, with the likely repercussions being a slowing in the rate of property purchases and a decline in the cashflow of property developers. However, there is speculation that the deterioration of the real-estate sector has resulted in the limited property tax being put on hold until market conditions improve. We believe that the government will be more cautious this year about implementing reforms that would hamper growth, now that economic stability has become the top priority. The ultimate challenge for the government is striking a balance between growth and stability.

03 The economic outlook

Examining recent government/central bank policies, there are some signs of willingness to try new ways to stabilise markets. This ties in well with the 6th Plenum of the Chinese Communist Party last year that will pave the way for this year's 20th Party Congress in October/November (exact dates are yet to be announced).

The near-term outlook for resurgent growth remains challenging due to ongoing housing sector consolidation and risks of new local lockdowns in the face of the Omicron threat. Yet, China's macro data seems to have started to turn in Q4 2021 with economic activity showing signs of stabilisation. Improvements over the past months have been observed in

retail and auto sales, industrial and services output, and manufacturing and infrastructure investment. Credit conditions have started to improve. Overall, the Q4 activity data suggests the Q3 drag from supply shock and energy rationing has faded, supporting a recovery in industrial activity with the manufacturing PMIs rising to their highest levels since July/August along with solid external demand and manufacturing investment. However, growth remained weak overall with GDP expanding only 4% in Q4 2021.

We have lowered our GDP forecast for China for 2022 from 5.6% to 5.3%. China is sticking to its zero-Covid strategy and the costs of implementing strict social distancing measures are a heavy burden for the economy. The weakness from Q4 last year could therefore extend into Q1 this year. However, we think that economic recovery could pick up from Q2 this year with stimulus policies as well as the possible relaxation of the Covid-19 social distancing restrictions.

The longer-term economic outlook will, however, ultimately be more important for the property sector. Looking beyond the current challenges, the underlying long-term positive drivers of the Chinese real estate market are likely to continue to support demand for housing. The urbanisation theme has further to run in China and over the past decade household disposable incomes have risen faster than house prices.

Meanwhile, growth aims are also changing. The Chinese government's "Common Prosperity" concept, which encompasses policies that range from curbing tax evasion to promoting not-for-profit tutoring, shifts the focus from "growth first" to striking a balance between growth and stability. Many measures on the path to common prosperity seem likely to eventually result in a structural boost to consumption. In particular, China wants to support the growth of a larger



middle-class. Examples like enhancing social security, supporting lower-income groups, moving to a more inclusive education system, providing tax incentives for charitable activities etc. argue for a more sustainable growth pattern over the longer term. Longer-term demand for properties could therefore remain high considering ongoing urbanisation and the upgrading demand of middle-class population groups.

04 A sector recovery in 2022?

Considering the stabilising measures attempted by the Chinese government and the wider economic context, it appears that most of the correction is probably already behind us.

In order to achieve the Chinese government's goals in the property sector there is likely to be continued restructuring and deleveraging among the property developers in 2022 with credit generally being tightened across the real estate sector. A significant pick-up in default rates is however unlikely given policymakers' intention to curb any kind of contagion effects in the system. The PBoC may take a more flexible approach to avert any excessive market reaction to the default risks of individual companies.

A key question for investors is whether the high yields available in Chinese HY property are sufficient to compensate for the default risks. Looking at the historical default rate for China since 2015, HY property reached a peak of 29.4% in 2021. According to market estimates, the 2022 rate is likely to be below that of 2021. Yet, more highly leveraged developers and those with lower credit ratings could see higher rates of default.

We believe investors could consider taking a more diversified and managed approach to investing in the sector to avoid the idiosyncratic default risks in China's HY property sector. As noted above, sector recovery may still be possible once government policies become more accommodative and the macro environment improves compared to H2 2021, as envisioned in our longer-term outlook.

The investment grade section of the Chinese USD-denominated credit market has so far held up better, despite all the turmoil in the junk rated segments, due to only around 10% exposure to the real estate sector. However, individual property names in this segment have seen the anxiety spillover to their issuance despite being IG rated. For example, in mid January, there were rising concerns over a large property developer in China that had failed to attract interest for its convertible bonds. In the current environment with still weak investor sentiment, we believe sticking to high-quality companies and taking a diversified approach will be the most appropriate strategies for weathering potential short-term volatility, when looking at it with a longer-term lens, keeping in mind the ambitions of the "Common Prosperity" drive.

05 Broad market outlook

The "Common Prosperity" theme is a very powerful one and is shifting the strategic direction from growth first to striking a balance between growth and stability. This should justify a longer-term constructive picture for the Chinese market, once we are through the near-term adjustments. As well as the social equality theme and a self-sufficiency drive with "Made in China 2025", industrial policy is increasingly aimed at expanding high-tech sectors and developing the country's advanced manufacturing base. The implementation of "Made in China 2025" initiatives include broad-based efforts to shift China's industrial sectors from labour-intensive to technology-intensive activities. This will ultimately benefit companies in these forward-looking and high-tech sectors like semiconductors and medical machinery and equipment.

This policy mix may make for a continued positive environment for domestic A-shares, and the "Made in China 2025" strategy could eventually drive some recovery in H-shares as well. High-tech manufacturing industries such as pharmaceuticals, computers and office equipment are likely to maintain rapid growth in 2022 amid the country's continued efforts to encourage "science and technology innovation". Overall, 2022 and 2023 EPS growth estimates – at around 15% for China mainland stocks and those for H-shares slightly lower at 12% and 13% respectively – suggest there is potential for positive performance over the course of the year. An improvement in risk sentiment would be beneficial for all asset classes in China.

We currently hold neutral views on Chinese equities, but we think investment opportunities could arise if more economic recovery signals materialise in the coming months. In particular, we think more aggressive monetary/fiscal easing measure announcements, normalisation of the Covid-19 situation domestically, relaxation of the strict lockdown rules and a turnaround in macroeconomic indicators (especially in manufacturing and consumption) could signalise a market recovery.



Bibliography

DBS, China Property: Awaiting policy supports to come to play. November 15, 2021.

Commerzbank, Hao Zhou, Dr. Marco Wagner, China property update: Policy fine-tuning? November 11, 2021.

Morgan Stanley, Kelvin Pang, Asia Credit Outlook, Dealing with the 'Problem Sector – China HY Property. November 14, 2021.

Morgan Stanley, Kelvin Pang, Five Reasons Why We Are Turning Bullish on China HY/China HY Property. October 18, 2021.

Standard Chartered. Brian Lewis, “Onshore no credit pressure; RRR cut to come; decarbonisation; growth consolidates”. November 15, 2021.



Glossary

The **consumer price index (CPI)** measures the price of a basket of products and services that is based on the typical consumption of a private household.

Gross domestic product (GDP) is the monetary value of all the finished goods and services produced within a country's borders in a specific time period.

High yield (HY) bonds are higher-yielding bonds with a lower credit rating than investment-grade corporate bonds, Treasury bonds and municipal bonds.

An **investment grade (IG)** rating by a rating agency such as Standard & Poor's indicates that a bond is seen as having a relatively low risk of default.

Mergers and acquisitions (M&A) are two key methods of corporate consolidation: A merger is a combination of two companies to form a new company, while an acquisition is the purchase of one company by another in which no new company is formed.

Open market operations (OMO's) refers to central banks' sale and purchase of securities in the open market to implement monetary policy.

Producer price inflation (PPI) measures the change in prices received by producers (e.g. firms) for their output.

The **People's Bank of China (PBoC)** is the central bank of the People's Republic of China.

USD is the currency code for the U.S. Dollar.



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