Evolving Financial Stress in China's Property Development Sector

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Abstract

Financial stress in China's property development sector has attracted significant attention because it may have systemic consequences for financial stability in the broader Chinese economy. Though China Evergrande Group, one of the country's largest and most leveraged property developers, has received a considerable share of this attention, risks in the sector were building for some time prior to Evergrande's default in 2021. This article reviews contributing factors to the sector's financial fragility and explores the characteristics of the financial stress faced by major developers. It also considers some likely consequences of this fragility for the Chinese property development sector and beyond.

Introduction

Real estate investment associated with rapid urbanisation and households' demand for property as a financial asset has been an important source of economic growth in China in recent decades. Faced with substantial demand over a relatively short period of time, many Chinese real estate developers were able to run a risky and highly profitable business model, which relied on high leverage and rapid project turnover. However, this model also left developers particularly vulnerable to short-term funding stress – a risk that was realised in 2021 with the widely publicised default of China Evergrande Group. As large parts of China's property development sector have come under severe financial stress over the past year or so, concerns about risks to China's financial stability and the economic outlook have also increased. The wave of defaults and subsequent restructurings that are ongoing in the sector are likely to permanently change the structure of China's property development sector and reduce its capacity to engage in the rapid, large-scale development seen in recent decades.

Urbanisation and residential investment in China

The real estate sector has been a major contributor to China's economic growth, spurred by mass urbanisation over the past several decades. In the late 1970s, when a series of economic reforms and many market-oriented policies began to be introduced, less than one-fifth of the Chinese population lived in urban areas; by 2020, this share had grown to more than three-fifths (United Nations 2021). Because significant investment in urban real estate was required to facilitate this process, dwelling investment as a share of GDP in China increased rapidly over the past few decades (Graph 1).

The growth of the Chinese real estate sector gathered pace in the 1990s as the privatisation process of the housing stock, which had been largely state-owned until that point, began. These reforms unleashed a considerable increase in housing demand as residents were allowed to purchase the homes they had previously been renting from the state and also increase their housing consumption (Wang 2011). Demand was further spurred by households acquiring property as a financial asset; other asset classes like equities or bonds had historically been inaccessible or simply offered lower returns, partly because of artificially low interest rates (Adams *et al* 2021). Cultural factors also contributed to this demand, with home ownership often seen as a necessity for marriage (Glaeser *et al* 2017). Reflecting the characteristics of this underlying demand, Chinese home ownership rates are now among the highest in the world (Graph 2). Second-home ownership is also very common, with more than 20 per cent of urban households owning multiple homes (Huang, Yi and Clark 2020).

This high level of demand for housing enabled real estate development more broadly (including commercial real estate) to become a significant driver of the Chinese economy, directly affecting one-quarter of GDP in 2018 (Rogoff and Yang 2021).[1] As a result, any concerns about the health of the Chinese real estate sector have substantial implications for Chinese economic growth, as well as for major trading partners, including Australia, which benefit from China's demand for iron ore and coal exports (Kemp, Suthakar and Williams 2020).

China's real estate development funding model and its risks

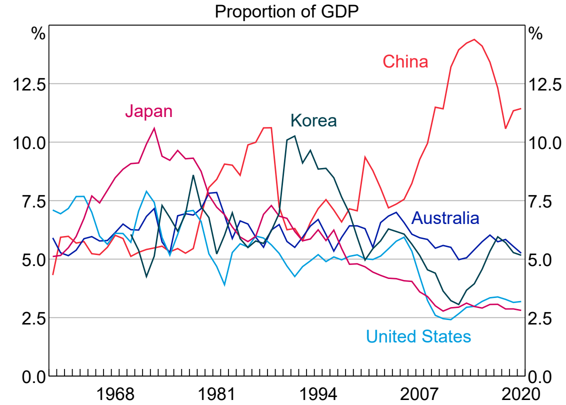
Significant real estate demand has benefited the Chinese property development sector and enabled some Chinese developers to become the largest in the world. The basic business model for most of these developers can be characterised in four steps:

1. Obtain funding to purchase land from local governments.
2. Presell properties to be developed to home buyers.
3. Begin construction on the project.

Graph 1

Residential Gross Fixed Capital Formation

Proportion of GDP

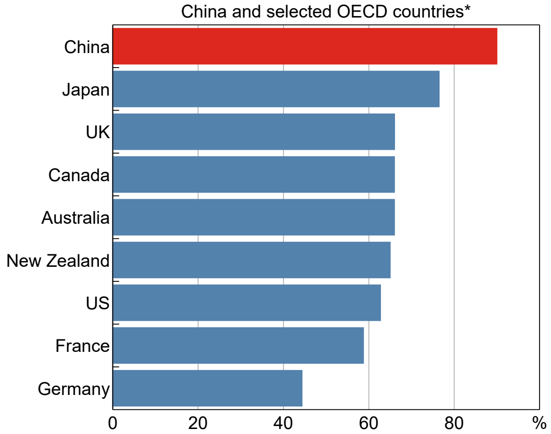


Sources: CEIC Data; NBS; OECD; RBA

Graph 2

Home Ownership Rates

China and selected OECD countries*



* Data from 2014–2015 for all countries except Australia, which has 2021 data.

Sources: Australian Census; Causa et al (2019); Clark et al (2021)

4. Use income from the project to secure funding to begin another project.

This reliance on rapid expansion was historically quite profitable, with the median major developer earning around a 7 per cent return on assets at the beginning of the 2010s, and some developers earning returns exceeding 10 per cent (Graph 3).[2]

However, profitability in the property sector has declined over time as China's housing stock has developed, the urbanisation process has begun to slow, and financial markets have matured further and become more accessible for households. Profitability has also declined as authorities have cracked down on housing speculation and sought to rebalance the economy away from reliance on the sector. Indeed, in 2021 a large share of listed property developing companies did not make any profits at all, with around 10 per cent of companies reporting negative returns on assets. Likewise, as profitability has declined and indebtedness has increased, the ability of some of the weaker developers to cover their interest payments out of earnings has also steadily declined. By 2020, around 10 per cent of major listed developers had an interest coverage ratio of less than one – meaning they were not earning enough to service their debt, even before accounting for any maturing loans.

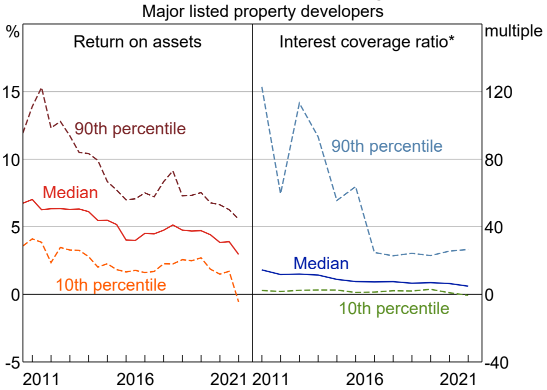
As profitability declined since 2010, developers increasingly innovated in their financing structures and business models, which increased financial risks in the sector. Issuance volumes of US dollar bonds increased through the 2010s, and these bonds grew to become a notable portion of major listed developers' interest-bearing debt (Graph 4). US dollar bonds were popular among overseas investors who were attracted by high-yielding bonds, while Chinese developers preferred offshore issuance due to the favourable bond pricing resulting from this demand and the limited need to provide collateral. Private real estate developers' US dollar bond issuance has been found to correlate with actual investment outlay, rather than just relative interest rates, implying that US dollar bond issuance was needed by these developers to fund activity (Ding, Huang and Zhou 2019).

In general, property developers face less rollover risk from bond financing than traditional bank loans because of the lower frequency of refinancing and the larger value of bond issuance. However, declining profitability, rising leverage and the way in which bond issuance is structured can make developers vulnerable to changes in investor sentiment. To enable access to offshore equity and debt financing, many private developers shifted to a complex corporate structure whereby a 'holding company' is registered in Hong Kong (often listed on the Hong Kong stock exchange). This holding company retains a controlling equity stake in the onshore (mainland China) 'operating company', which holds all the real estate assets. The holding company would then have additional subsidiary corporate vehicles registered in other jurisdictions, such as the Cayman Islands, which would issue the

Graph 3

Developer Profitability

Major listed property developers



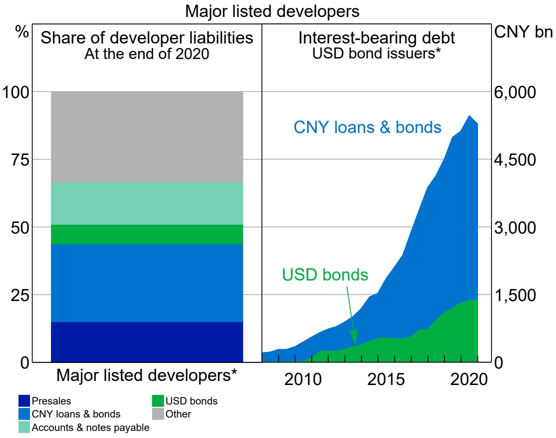
* Measured as earnings before interest and taxes divided by interest payments.

Sources: RBA; Wind

Graph 4

Developer Funding

Major listed developers



* Left panel includes a sample of major listed developers including those that do not issue US dollar bonds. Right panel includes only major listed developers that have issued US dollar bonds.

Sources: RBA; Wind

US dollar-denominated bonds. Because the offshore bondholders are creditors in only the offshore holding company, which itself has only an equity claim in the operating company's onshore assets, offshore creditors are 'structurally subordinate' to onshore creditors – that is, onshore creditors have priority over offshore creditors in the event of bankruptcy. Despite developers' attempts to enhance their offshore credit quality with legal devices like 'keepwell deeds' (the enforceability of which is in question), offshore developer bonds are naturally riskier than onshore credit and are subject to sudden changes in offshore creditors' confidence (Tudor-Ackroyd 2020).[3] Developer funding also relied on non-interest-bearing debt, like accounts and commercial notes payable to suppliers, and funds from presales.

Over the 2010s, many developers expanded their business models well outside of real estate. However, rather than diversifying to improve cash flow stability, a number of developers invested in relatively speculative or unprofitable ventures, including football teams. Evergrande Group was particularly well known for this strategy, having invested in ventures as diverse as electric vehicles, a streaming service and theme parks.

Along with these changes in the composition of their financing and business models, developers were also operating with increasingly high leverage ratios and gearing ratios. This trend prompted a series of regulatory responses, which culminated in a crackdown on developer leverage, known as the 'three red lines' (Kemp, Suthakar and Williams 2020).

Tighter regulation of the property sector

By 2020, Chinese regulators had become increasingly concerned about growing leverage in the real estate development sector.[4] Authorities implemented new regulations on the property sector in August that year, introducing the so-called 'three red lines' policy, which would apply first to 30 major developers before being rolled out to the rest of the sector (Wang *et al* 2020). The thresholds – or 'red lines' – were:

1. The debt-to-asset ratio (not including presales) was not to exceed 70 per cent.
2. The net debt to shareholders' equity was not to exceed 100 per cent.
3. The cash to short-term debt was not to fall below 100 per cent.

The penalty for non-compliance would be strict limits on developers' allowable annual debt growth, depending on the number of red lines crossed. These thresholds were only a little stricter than the ratios actually reported by the median major developer for 2020, while developers in the 90th percentile (or 10th percentile for cash ratios) were well in breach of these ratios (Graph 5). One conclusion from this exercise was that a large number of major developers would need to undergo significant deleveraging in 2021.

Although the three red lines policy was aimed at improving the financial stability of the real estate development sector in the long run, these regulations made the financial position of the riskiest developers even more precarious in the short term as they attempted to quickly deleverage (Graph 6).

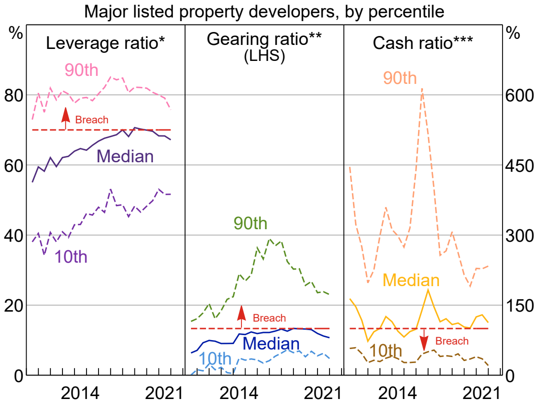
Evergrande Group's spiral of financial stress

The level of financial stress faced by property developers was apparent by mid-2021 when two major Chinese developers, China Fortune Land and Sichuan Languang, defaulted on US dollar bonds (Bloomberg 2021a; Bloomberg 2021b). However, it was Evergrande Group that ignited more serious

Graph 5

Crossing the Three Red Lines

Major listed property developers, by percentile



* Liabilities to assets (discounting advance payments).
** Net debt minus cash to equity.
*** Cash to short-term debt.
Sources: RBA; Wind

concerns about the industry later that year. Evergrande was China's largest developer by total assets at the end of 2020, and was known for its high leverage and wide range of business ventures. Evergrande had been increasingly profitable until 2018; however, its earnings fell considerably over the next couple of years, even while its leverage increased, the interest coverage ratio fell and the maturity of its liabilities shortened.

As it became apparent over 2020 that Evergrande's fundamentals had deteriorated, the volatility of the company's bond and equity prices increased and became highly sensitive to negative news about the company (Graph 7).[5] At the end of May 2021, Evergrande's share and bond prices fell rapidly, triggered by news that regulators were examining transactions between Evergrande and Shengjing Bank, in which Evergrande held a major stake. The equity and bond price falls steepened in July on a string of negative news – a court in Jiangsu province froze Evergrande's bank deposits, sales in some Evergrande developments were suspended, and Hong Kong banks suspended new mortgages for Evergrande developments in Hong Kong (Yu 2021; Hale 2021; Reuters 2021; Bloomberg 2021c). Despite Evergrande's size and prominence, financial markets initially did not treat these issues as systemic or sector-wide.

Contagion in the development sector and beyond

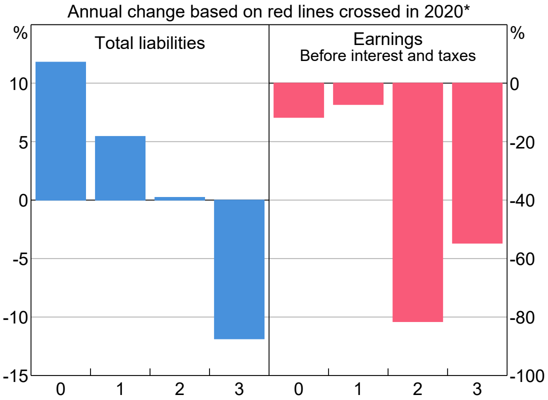
Between July and September 2021, bond prices for some other highly leveraged private property developers started falling as markets became increasingly concerned about developers' ability to repay their debts. These concerns were exacerbated by the warnings of imminent default by other developers around this time, including Fantasia Holdings. As concerns about the financial stability of property developers spread, a large number of local governments imposed further restrictions on the withdrawals of presales funds from escrow accounts by all developers (Yu and Jim 2022).[6] Although these measures were aimed at ensuring the delivery of local projects by enforcing existing rules on the *usage* of presales funds, the change in enforcement effectively cut off a large number of developers from having *access* to these funds, which is an important source of developer funding, adding further to their funding stress (Yu and Jim 2022).

While financial markets initially viewed these developments as a liquidity crisis for a few developers, in late 2021 concerns started to shift towards solvency. Around this time, a significant gap opened up between the equity prices of state-owned developers and private developers (Graph 8). Rather than pricing developer bonds on the basis of the parent company's liquidity – their cash and short-term assets – financial markets became focused on their solvency, including whether they would be likely to receive government support. The evolution of this shift in

Graph 6

Developer Performance in 2021

Annual change based on red lines crossed in 2020*

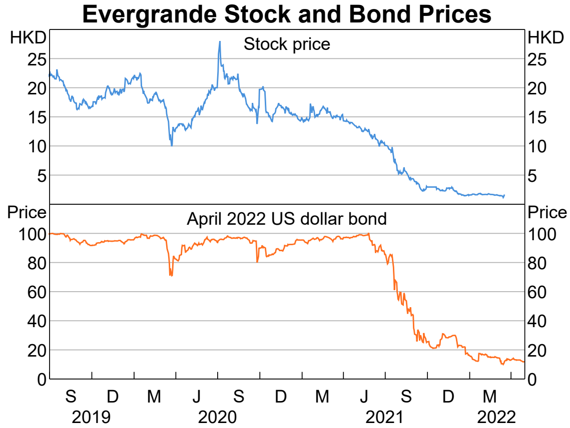


* Excluding developers that did not submit a 2021 annual report.

Sources: RBA; Wind

Graph 7

Evergrande Stock and Bond Prices



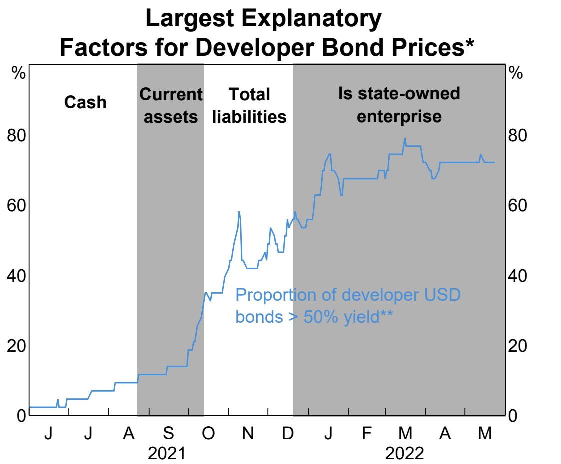
Sources: Bloomberg; RBA

sentiment can be seen in rolling regressions of major listed developers' US dollar-denominated bond prices on their financial characteristics as of 2020 – their cash holdings, current assets, change in net profits since 2019, and total liabilities – and whether they were a state-owned enterprise (see Appendix A). The results suggest that the largest contributing factors for bond price changes (holding all other variables constant) in the early stages of the crisis were the developer's cash holdings and current assets (Graph 9) – that is, developers' liquidity and ability to meet their short-term debt repayments. However, by late-September 2021, the focus had shifted to solvency, with the largest contributing factors being the developer's total liabilities and whether they were a state-owned enterprise, indicating that markets became focused on simply whether a developer had explicit state support.

These developments made it more difficult for private developers to obtain additional financing, further increasing their likelihood of defaulting. Consequently, the vast majority of major listed private property developers, and more than half of all major listed developers (weighted by 2020 assets) have now either already defaulted or been under severe financial stress (Graph 10).[7]

Developers continue facing difficulties in financing themselves as funding markets have dried up and demand for presales has softened. Over the past six months, developers under stress (or that have already defaulted on another bond) have had considerable difficulties issuing any bonds, leaving them with significant financing gaps as sizeable offshore bonds mature. By contrast, state-owned developers have largely been able to maintain access to onshore bond markets (where they have historically obtained a large share of their bond funding) (Graph 11). These recent developments suggest that the property development industry is likely to become smaller, more concentrated and more state-led than during the high growth boom of recent decades, as many defaulting developers are likely to either go through debt restructuring, be acquired by healthier developers or go bankrupt.

Graph 9

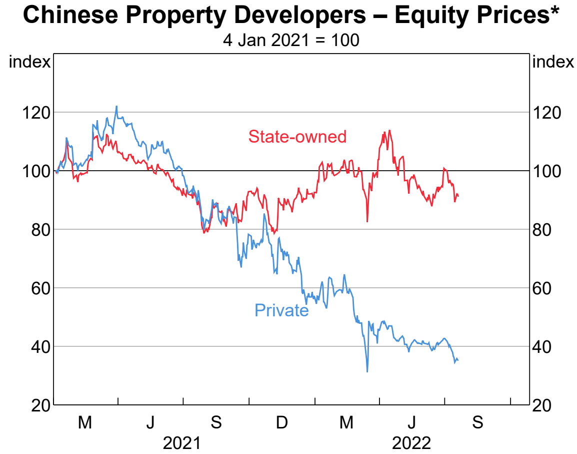


* Largest contributing coefficients for a 100 per cent change in a variable at a given time, holding other variables constant, shown by shaded/unshaded areas, see Appendix A for details.

** For major listed property developers.

Sources: RBA; Refinitiv; Wind

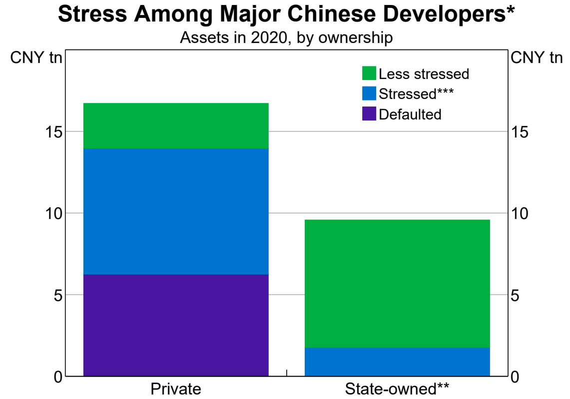
Graph 8



* Selected major property developers excluding China Evergrande Group.

Sources: Bloomberg; RBA

Graph 10



* Listed property developers with total assets greater than CNY60 billion.

** State-owned developers includes mixed-ownership developers with majority state control.

*** Includes those developers experiencing bond yields greater than 50 per cent or having requested a bond extension.

Sources: Bloomberg; Fitch; RBA; Wind

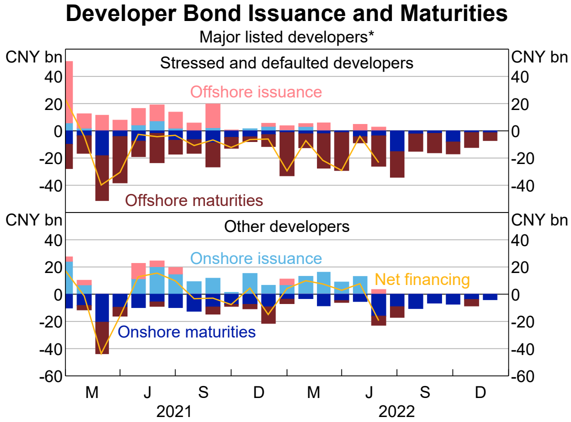
Restructuring in the property development sector is likely to be a significant drag on China's economic growth and place additional strains on local government finances for some time. The restructuring process, even when successful, is typically lengthy, during which a developer's operations slow considerably.[8] Developers undergoing restructuring are likely to demand less land for new properties even as they continue to sell properties close to completion. This slowdown is already evident through slower property sales in 2021 for defaulted developers. Recent evidence also suggests that local governments, which derive a large part of their revenue from land sales to developers, have sought to replace the reduced demand with purchases by local government financing vehicles (Bloomberg 2022a) – a kind of state-owned investment vehicle, which often engage in infrastructure development. As such, these land purchases are likely to add to ongoing concerns about the viability of these vehicles and the financial stability risks they pose (Holmes and Lancaster 2019; RBA 2022).

Along with direct effects on employment and activity in the property development sector and its suppliers, and the consequences to banks of holding non-performing property developer loans on their balance sheets, developer stress may also reduce confidence among home buyers, leading to a decline in housing prices. In July 2022, reports circulated that some home buyers who had not yet received properties they were presold had stopped making mortgage repayments on the properties (Bloomberg 2022b). Maintaining buyer confidence in the housing market even as major property developers remain under financial stress remains a key challenge for the authorities.

Conclusion

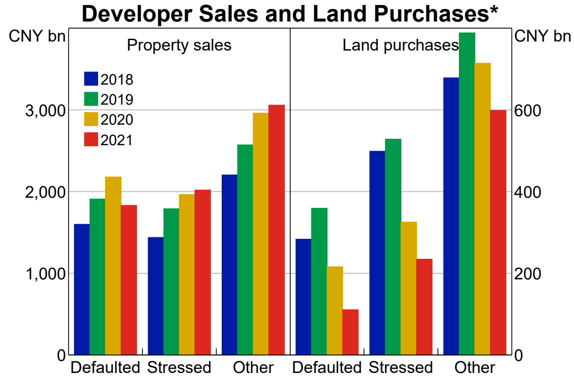
China's property development sector came under severe financial stress in 2021. This followed the accumulation of risks in the sector over a number of years – the result of long-term economic and demographic trends that led to high demand for housing, and the highly leveraged business models that developers adopted to expand rapidly in response to this demand. After the authorities implemented regulation aimed at reducing leverage in the sector, a series of high-profile property developer bond defaults followed. These defaults exacerbated pressure on healthier developers as markets became increasingly concerned about developers' solvency risk, rather than only liquidity risk, and the likelihood of state support. The sector is likely to consolidate and become more state-led as a consequence. The ongoing funding stress and difficulty for developers in delivering presold projects poses substantial risks to the real estate market as a whole, and has increased the risks surrounding local government financing.

Graph 11



* Issuance to end of June 2022.
Sources: Bloomberg; RBA; Wind

Graph 12



* Major listed property developers.
Sources: RBA; Wind

Appendix A

Data

This analysis uses data on US dollar bonds that were outstanding between the start of 2021 and June 2022 issued by property developers listed in Hong Kong, Shenzhen or Shanghai, along with balance sheet information from the developers.

Bond price data are from Refinitiv, compiled by matching the International Securities Identification Number on bonds from issuers classified as property developers by the Wind Financial Terminal. Developers' balance sheet data are from their 2020 annual reports. An indicator for whether a firm is a state-owned enterprise is derived for listed developers that had greater than CNY60 billion in assets in 2020 from a combination of the Wind Financial Terminal and developer websites; mixed-ownership firms are classified as state-owned enterprises where the central or a local government has a controlling voting stake. This yielded a sample of 63 developers with a total of 321 bonds outstanding over the period.

Model

The following regression model was used to quantify the effect of balance sheet characteristics and state-ownership on bond yields:

$$\begin{aligned} price_{jki} &= \beta_0 + \beta_1 \ln(Cash^{2020})_k + \beta_2 \ln(CurrentLiab^{2020})_k \\ &+ \beta_3 \ln(CurrentAssets^{2020})_k + \beta_4 \ln(\Delta \mathrm{NetProfit}^{2020-2019})_k \\ &+ \beta_5 \ln(TotalLiab^{2020})_k + \beta_6 SOE_k + \epsilon_{jki} \end{aligned}$$

Where:

- *j* is the date, *k* is the developer and *i* is the bond
- the variable *price* is the price of the bond
- *Cash* is the firm's cash and cash equivalent holdings
- *CurrentLiab* and *TotalLiab* are current and total liabilities
- *CurrentAssets* is the firm's current assets
- $\Delta \mathrm{NetProfit}^{2020-2019}$ is the percentage change in the firm's net income between 2019 and 2020
- *SOE* is an indicator variable for being a state-owned enterprise.

Logs were taken for each variable other than the indicator variable so that the coefficients are interpretable as the effect for a 100 per cent change in a variable. Standard errors were clustered at the level of the developer to account for multiple bonds issued by the same developer.

The regression results can be found in Table A1.

To produce the coefficient estimates used in Graph 9, regressions were run over a rolling 60-day window throughout the sample, producing coefficient estimates on data from the previous 60 days. ✠

Table A1: Developer Bond Price Regression Results

	Coefficient (standard error in parentheses)
ln $(Cash^{2020})$	6.300 (9.610)
ln $(CurrentLiab^{2020})_{jk}$	1.036 (22.523)
ln $(CurrentAssets^{2020})_{jk}$	16.451 (26.338)
ln $(\Delta \mathrm{NetProfit}^{2020-2019})_{jk}$	4.480 (1.905)
ln $(TotalLiab^{2020})_{jk}$	−20.159 (30.009)
SOE	28.951 (7.596)
Constant	−27.878 (77.958)
R2	0.1551

Sources: Wind; Refinitiv; RBA

Endnotes

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[1] From estimates using input-output tables (which include residential and commercial real estate as well as multiplier effects).

[2] The focus of this article is on major listed developers, defined as developers with total assets greater than CNY60 billion as at the end of 2020, which were listed in Hong Kong, Shanghai or Shenzhen. This is because these developers pose the greatest financial stability risk, and due to data availability reasons. Major listed developers accounted for around one-third of total property sales in 2019.

[3] 'Keepwell deeds' involve a promise by the operating company to keep the holding company solvent. This in effect gives offshore creditors a supposedly enforceable action onshore against the operating company if the holding company defaults, beyond simply an equity interest, but falls short of a guarantee.

[4] For instance, the People's Bank of China specifically called out the financial risks of large-scale enterprise groups, even naming Evergrande Group (People's Bank of China 2018).

[5] For instance, its bond prices declined in September 2020 as a leaked document circulated that Evergrande claimed was fake (Jim 2020).

[6] In principle, the national Urban Real Estate Management Law requires presales proceeds to be used for the construction of related projects, and local regulations often specify development milestones to be met before developers can access proceeds from supervised escrow (presale) accounts. See, for example, Tianjin Municipal People's Government (2021) and Chongqing Municipal People's Government (2021). However, some developers reportedly accessed these presales funds to cover expenses other than construction costs, which is against the regulations, leading to calls for increased supervision (Zhang 2020).

[7] Defined as US dollar bonds pricing at greater than 50 per cent yield.

[8] For example, Kaisa Group in 2015 became the first Chinese developer to default on a US dollar bond. Kaisa was restructured in 2016, but it was another year before the trading suspension on its stocks was lifted, and it did not resume issuing US dollar bonds until 2019.

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