

## Global Debt Leverage

# Can China Escape Its Corporate Debt Trap?

Oct. 19, 2021

*This report does not constitute a rating action*

### Key Takeaways

- **Too big to ignore.** China's corporate debt of US\$27 trillion is equivalent to 31% of the global total, making it too big for investors to ignore. Its debt-to-GDP ratio of 159% is markedly higher than the global rate of 101% and twice the U.S.' 85%, implying substantial financial and economic contagion risk.
- **Policy trigger.** The central government's decision to reduce financial risk in the economy, especially in speculative activities (for example, real estate), has triggered liquidity stress for highly leveraged corporates.
- **Three-fifths of Chinese entities are in the global quartile with the worst risk.** We estimate, based on a 5,000-plus entity sample, that 58% of China's corporates are highly indebted (the global quartile with the highest credit risk). This is sharply above the global sample's 38%.
- **Half are in construction or property.** 45% of the sampled China corporate debt is in construction and engineering, and real estate. Of this, we would categorize three-quarters as highly indebted.
- **No pain, no gain.** With the Chinese government's resources, the corporate debt trap could be overcome--but not without pain for borrowers and lenders. In a "what-if" scenario where about 5% of existing debt is retired (amortized) annually, the debt-to-GDP ratio could ease to the global average by 2030.

The recent troubles of property group China Evergrande Group have rattled investors. Should Evergrande default, there may be contagion effects for other developers, home prices, and the economy. Evergrande's cash flow troubles foreshadow what could go wrong for liquidity-challenged Chinese corporates (see "[Credit FAQ: Evergrande Default Contagion Risk--Ripple Or Wave?](#)" published Sept. 20, 2021, on RatingsDirect).

S&P Global Ratings believes that Evergrande hints at credit strains simmering among Chinese corporates, and a strong resolve by the government to tackle this issue. We probe these pressures in a survey involving 25,000-plus global entities that reveals that the leverage levels of China's corporate sector are significantly above the global average. It is a US\$27 trillion problem that is increasingly getting the attention of Beijing.

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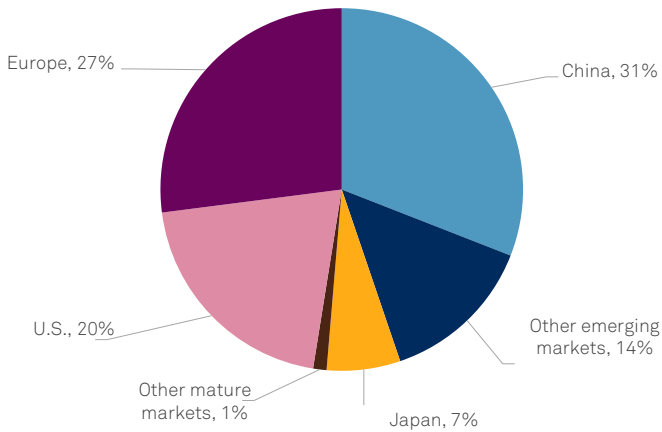
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## Should investors be concerned about China's corporate debt?

Simply put, yes, because China has a very large amount of corporate debt. In fact, China's corporates contribute almost a third (31%) of global corporate debt (see chart 1). In contrast, the country only contributes a fifth of global GDP (see chart 2). Consequently, China's corporate debt-to-GDP leverage ratio of 159% (June 2021) is one of the world's highest (see chart 3). The growth rate of debt remained high even in early 2021 (see chart 4), even as China recovered from the worst of COVID.

Chart 1

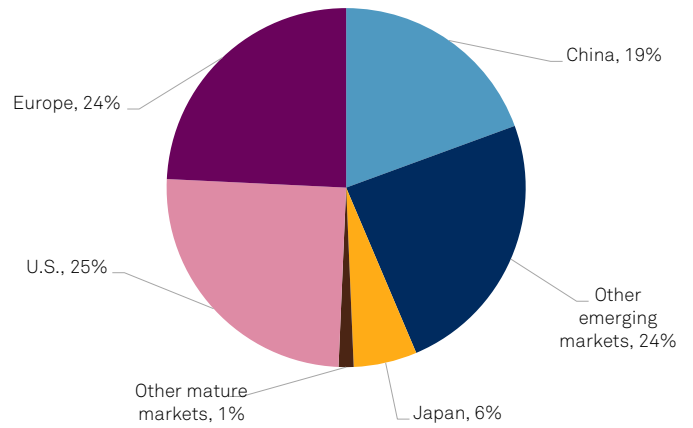
**Global Nonfinancial Corporate Debt By Geography, June 2021**



Corporates include both private sector and government-related. Source: International Institute of Finance.

Chart 2

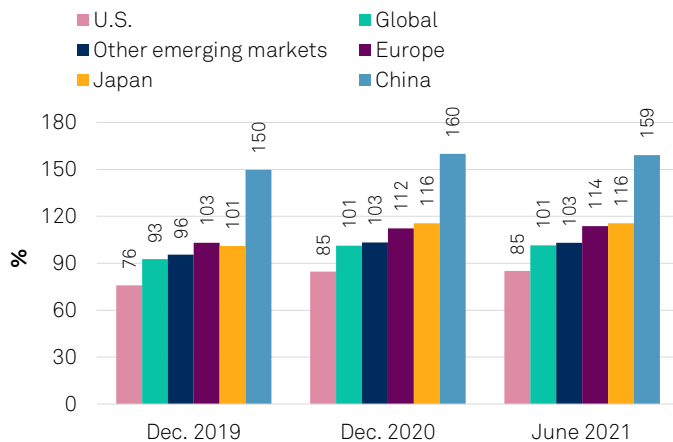
**Gross Domestic Product By Geography, June 2021**



Source: International Institute of Finance.

Chart 3

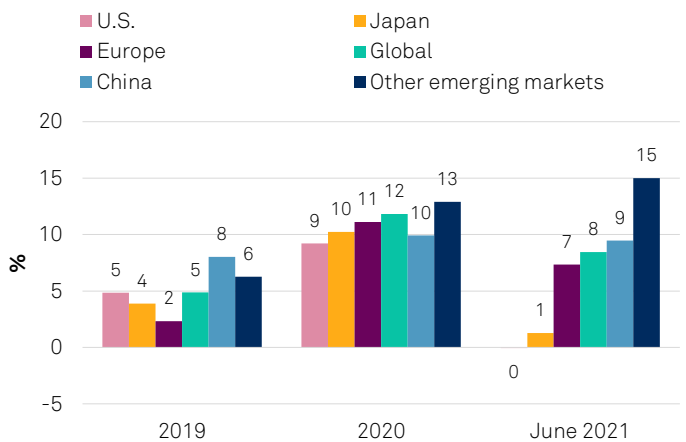
**Nonfinancial Corporate Debt-To-GDP**



Source: International Institute of Finance.

Chart 4

**Corporate Debt Change (Year-On-Year)**



Note: Debt in U.S.-dollar-equivalent except for China and Japan, which is in local currency. Source: International Institute of Finance.

## But haven't Chinese corporates been highly leveraged for years already?

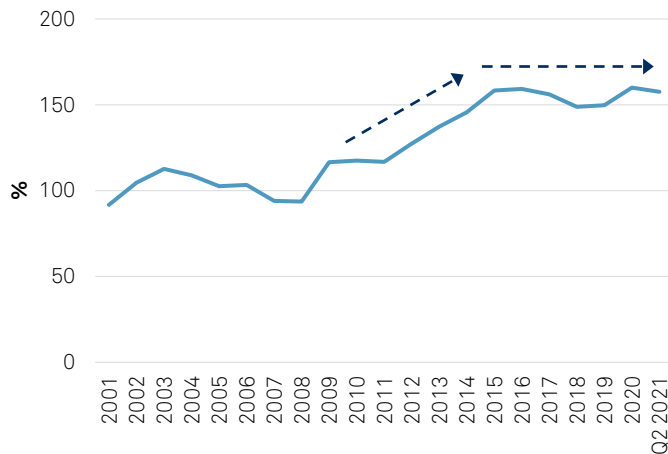
Yes. We highlighted the buildup of China's corporate leverage as far back as 2015 (see "[Global Corporate Credit: Twin Debt Booms Pose Risks As Companies Seek US\\$57 Trillion Through 2019](#)," July 16, 2015).

**Sector leverage.** The run-up in leverage did stabilize mid-decade (see chart 5) as the Chinese government curbed excessive debt growth. The efforts were only partially successful with corporate leverage remaining stubbornly high. While household leverage did more than double in the mid-to-late 2010s, its level is comparatively low, as is that of the general government (see chart 6). Comparisons of the absolute size of China's corporate, government, and household sector debt against those of other countries are shown in charts 7-9.

China's heavy-investment economic structure underpins its high corporate leverage. Furthermore, its large manufacturing sector and international trading sector (relative to GDP) calls for sizable asset financing and trade credit, respectively. Easy domestic financing conditions and government policy encouragement to fund corporate and government investment projects via credit further prop up leverage.

Chart 5

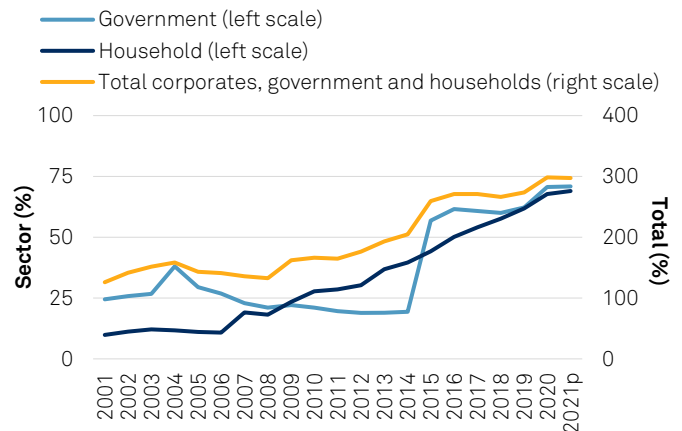
### China Corporate Debt-To-GDP



Q2--Second quarter. Source: International Institute of Finance.

Chart 6

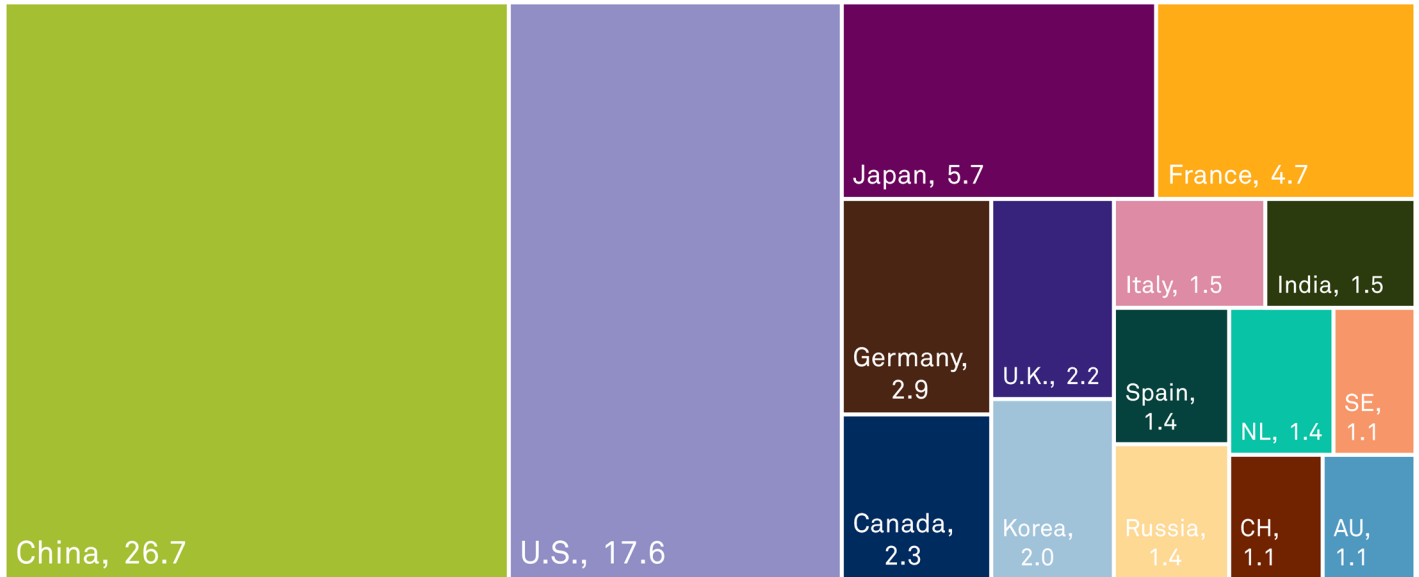
### China Gross Debt-To-GDP



p--Projection. Source: 2001-2006: International Institute of Finance; 2007 onwards, S&P Global Ratings.

Chart 7

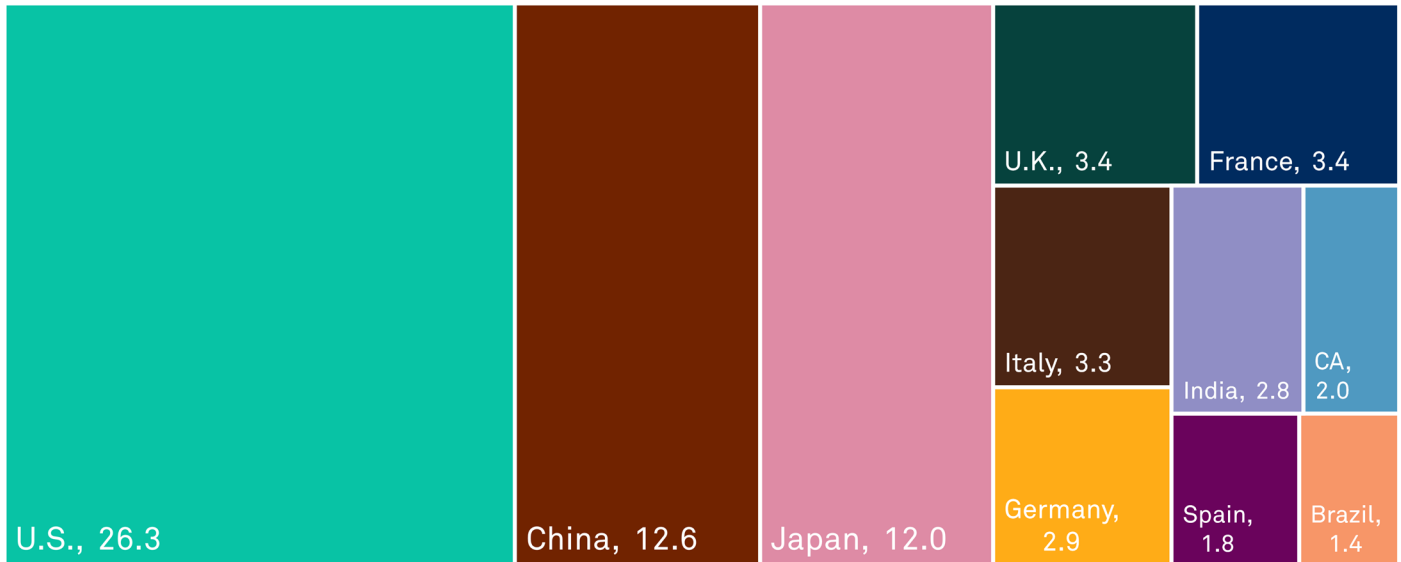
Corporate Debt (Trillion US\$), June 2021



AU--Australia. CH--Switzerland. NL--Netherlands. SE--Sweden. U.K.--United Kingdom. All countries below US\$1 trillion are listed in the appendix of this report. Source: International Institute of Finance.

Chart 8

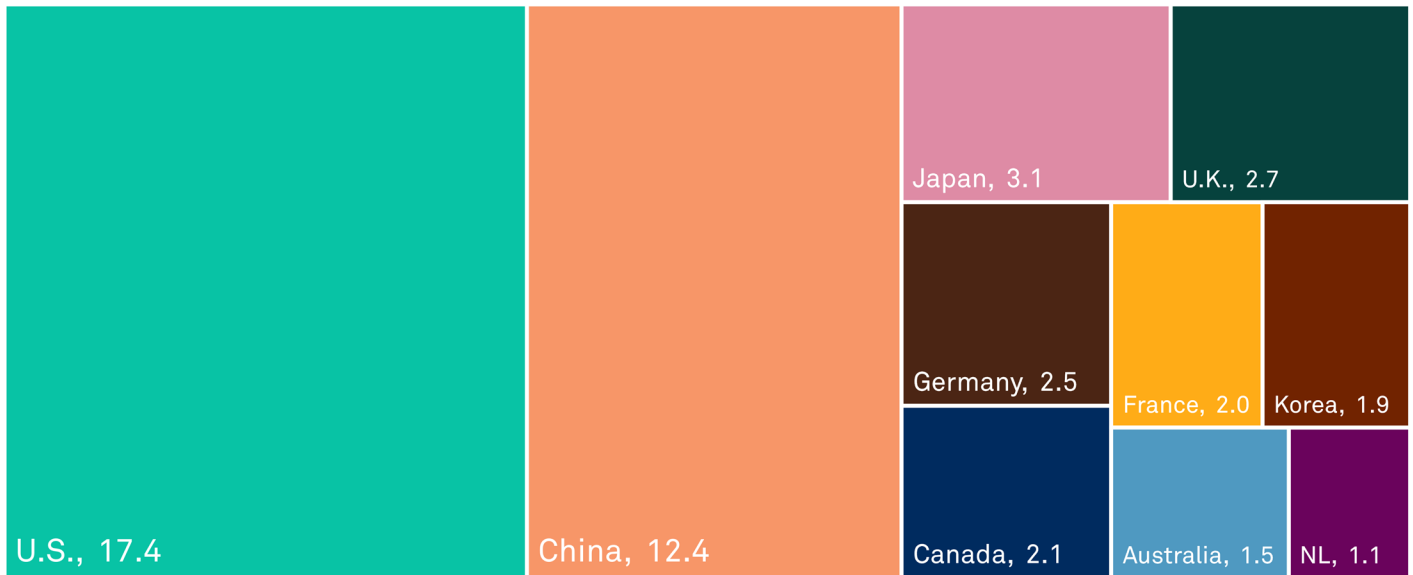
Gross Government Debt (Trillion US\$), 2021f



f--Forecast. CA--Canada. U.K.--United Kingdom. All countries below US\$1 trillion are listed in the appendix of this report. Data source: S&P Global Ratings' Sovereign Risk Indicators, July 12, 2021.

Chart 9

Household Debt (Trillion US\$), 2021f



f--Forecast. NL--Netherlands. U.K.--United Kingdom. All countries below US\$1 trillion are listed in the appendix of this report. Data source: Banking Risk Indicators, May 12, 2021, except Czech Republic, Estonia, Ghana, Latvia, Lithuania, Lebanon, Pakistan, Slovakia, United Arab Emirates, and Vietnam; International Institute of Finance.

How does China's corporate risk distribution compare with that of the global average?

It's worse. Based on a sample of corporates, we concluded that China's corporate sector has a higher risk profile than that of the global average.

**Global corporate sampling.** We examined the financials for the first half of fiscal 2021 for a sample of 25,210 global corporates, of which 23% (5,773) are China-based (data source: S&P Global Market Intelligence). Using this sample, we conducted a desktop scenario analysis by looking at each corporate's geography, industry, and financial risk (i.e., we did not conduct a rating exercise; see 'Appendix' for details). We then categorized each according to four buckets of indebtedness: low, moderately low, moderately high, and high.

We define high as a ratio of funds from operations to total debt as less than 12%, or debt to EBITDA as more than four times (see Appendix).

These categorizations are on a stand-alone basis and do not consider other credit factors such as management quality or potential support from the borrower's corporate group and the government.

**High indebtedness.** From a global perspective, China's corporates make up more than half (21% of 38%) of the global corporates we would categorize as having high indebtedness (see chart 10). This finding is not surprising, as we had in 2012 highlighted that "while the sovereign is very strong and the major banks [are] adequate on a stand-alone basis, the stand-alone financial risk profiles on China's largest companies are on average relatively weak" (see "[China Credit Spotlight: Significant Financial Risks Fan The Flames For China's Top Corporates](#)," Sept. 11, 2012).

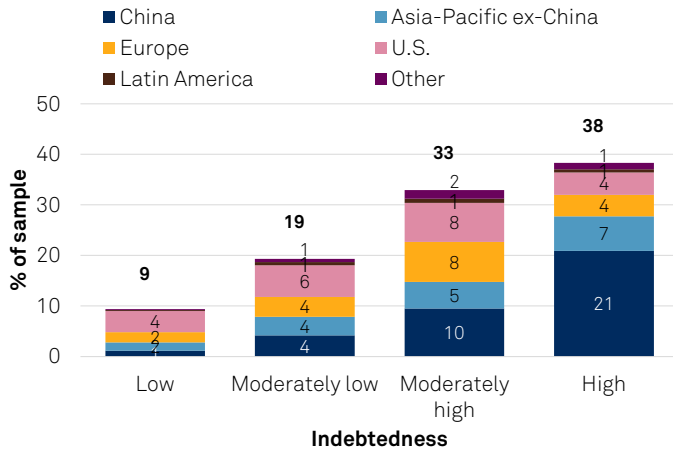
**Sample debt size.** The sample is statistically biased as it is self-selected. The financial data are drawn only from those corporates disclosing financials for the first half of fiscal 2021 (87% of the sample are listed). The global sample debt of US\$42 trillion is equivalent to 49% of the US\$86

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trillion in global corporate debt (data source: International Institute of Finance) (see chart 11). Meanwhile the China sample debt of US\$15 trillion is equivalent to 56% of the US\$27 trillion in Chinese corporate debt. The corporate population, which in China's case would include over 100,000 state-owned enterprises (SOEs), could be more or less risky than the sample.

Chart 10

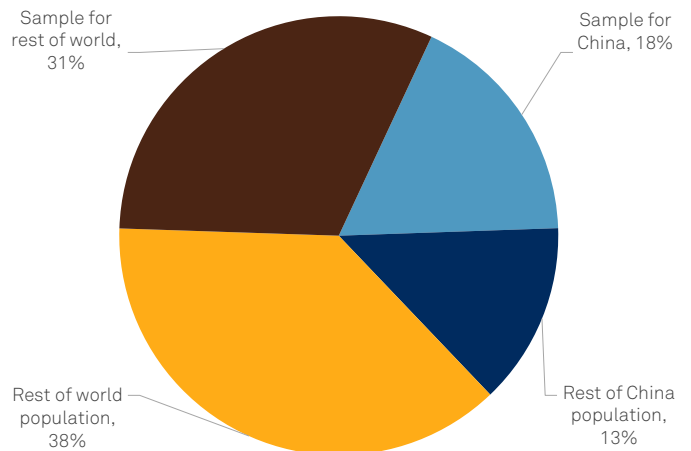
**Global Corporate Sample Risk Mix (Debt-Weighted), First Financial Half-Year 2021**



Note: Ratios are computed on a debt-weighted basis. Source: S&P Global Market Intelligence.

Chart 11

**Sample Debt As Percentage Of Population**



Source: S&P Global Market Intelligence.

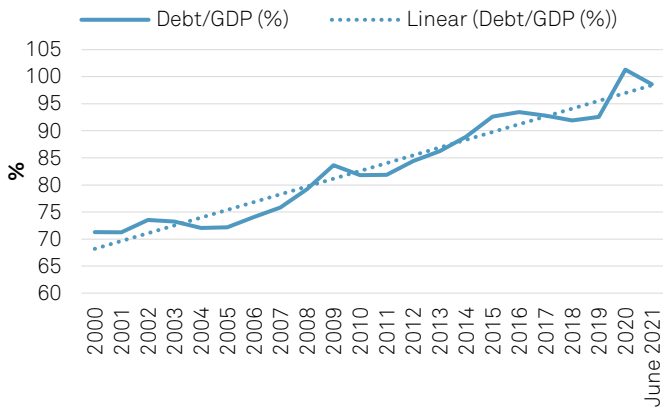
**Geographic comparison.** To keep China's corporate risk profile in perspective, it should be noted that global corporate leverage has been trending up for decades, amid a so-called "debt super cycle" (see chart 12). The global sample indicates a median risk profile of moderately high indebtedness (see chart 13).

Among the major economies, China's corporate risk distribution is the most negatively skewed (see chart 14) whereas that of the U.S. appears to be more of a normal distribution (see chart 15). Europe (see chart 16) has a somewhat riskier distribution than the U.S. while Asia-Pacific ex-China (see chart 17) tracks the global average.

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Chart 12

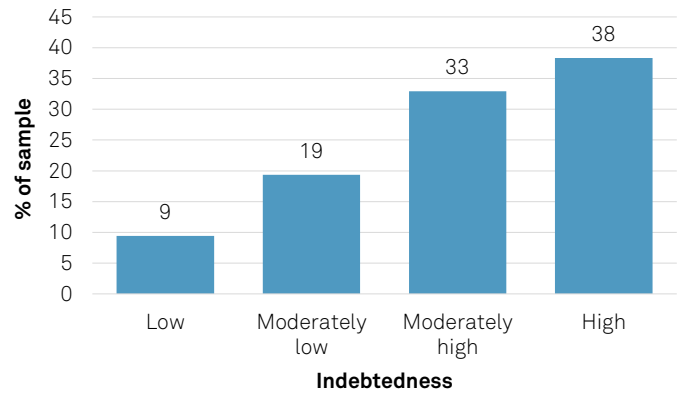
Global Nonfinancial Corporate Debt-To-GDP (%)



Source: International Institute of Finance.

Chart 13

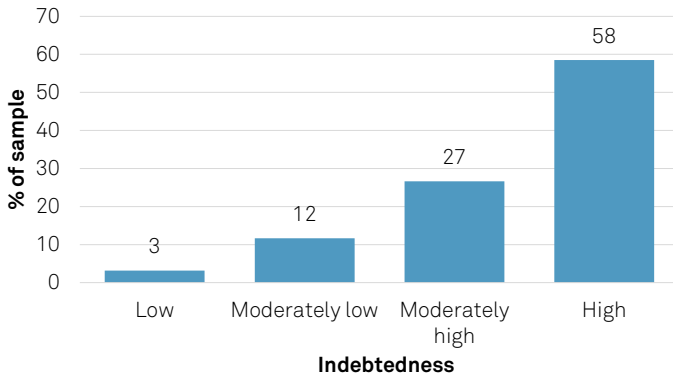
Global Sample, First Financial Half-Year 2021



Note: Ratios are computed on a debt-weighted basis. Source: S&P Global Market Intelligence.

Chart 14

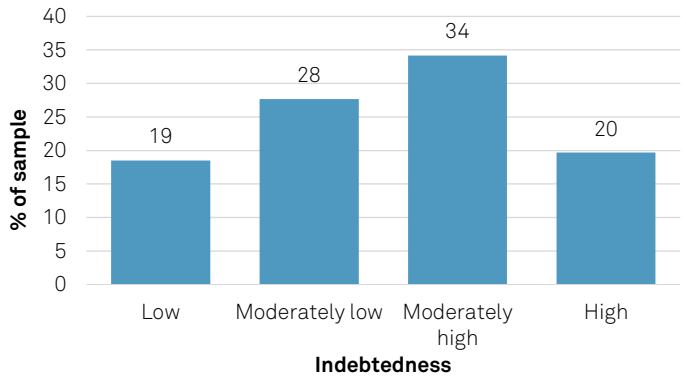
China Sample, First Financial Half-Year 2021



Note: Ratios are computed on a debt-weighted basis. Source: S&P Global Market Intelligence.

Chart 15

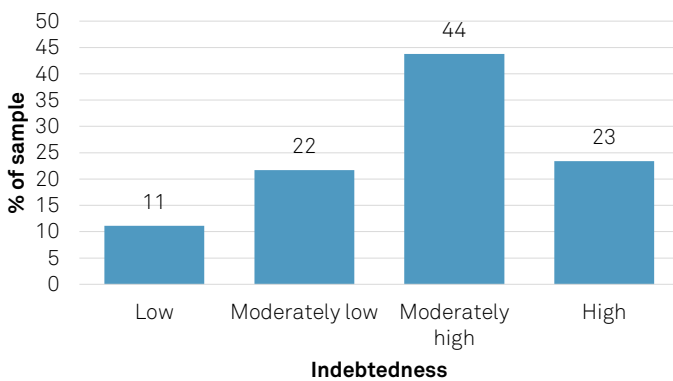
U.S. Sample, First Financial Half-Year 2021



Note: Ratios are computed on a debt-weighted basis. Source: S&P Global Market Intelligence.

Chart 16

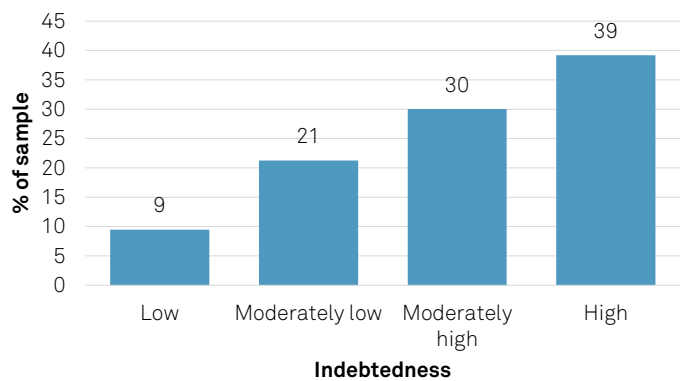
Europe Sample, First Financial Half-Year 2021



Note: Ratios are computed on a debt-weighted basis. Source: S&P Global Market Intelligence.

Chart 17

Asia-Pacific Ex-China Sample, First Financial Half-Year 2021



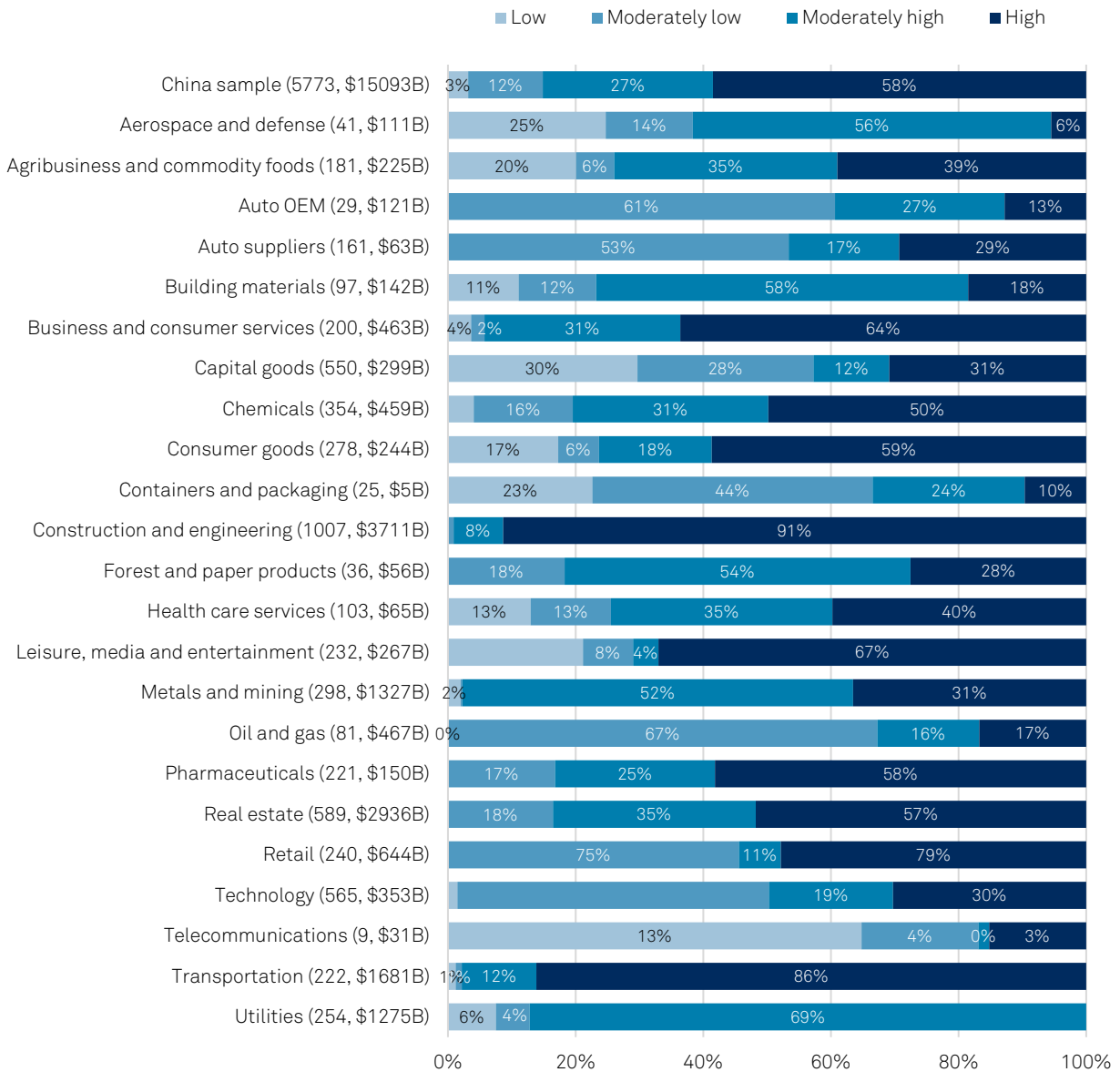
Note: Ratios are computed on a debt-weighted basis. Source: S&P Global Market Intelligence.

## Are China's construction and property sectors the most indebted?

Based on our sampling, yes, the construction-and-engineering sector is the most indebted, with real estate about average (see chart 18). Other industry sectors that have similar (or higher) levels of indebtedness to the real estate sector are transportation, retail, leisure, services, consumer goods, and pharmaceuticals.

Chart 18

### China Corporate Sectors (Alphabetical): Mix Of Indebtedness



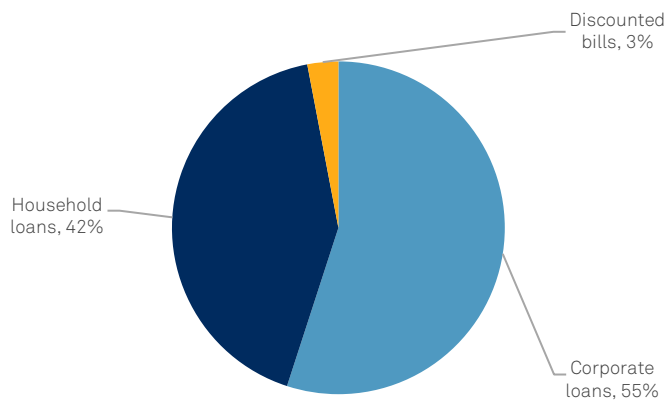
Numbers in brackets after sector name refers to sector sample count and debt amount (US\$ billion). Ratios are computed on a debt-weighted basis. OEM--Original equipment manufacturer. B--Billion. Source: S&P Global Market Intelligence.



**Debt mix by industry.** Our examination of the 2020 annual reports of the top 15 Chinese banks indicate that these banks' loan mix is 55% to corporates and 42% to households, while 3% are discounted bills (see chart 19, and "[Banking Industry Country Risk Assessment: China](#)," Aug, 9, 2021). In turn, transportation, storage, and postal services; manufacturing; and leasing and commercial services make up 51% of the corporate loan book (see chart 20). The real estate and construction related loan exposures are 11% and 4%, respectively. Meanwhile, the latest financial stability report of the People's Bank of China (the central bank) said the banking sector's exposure to property developers was 8% of total loans at end-2020.

Chart 19

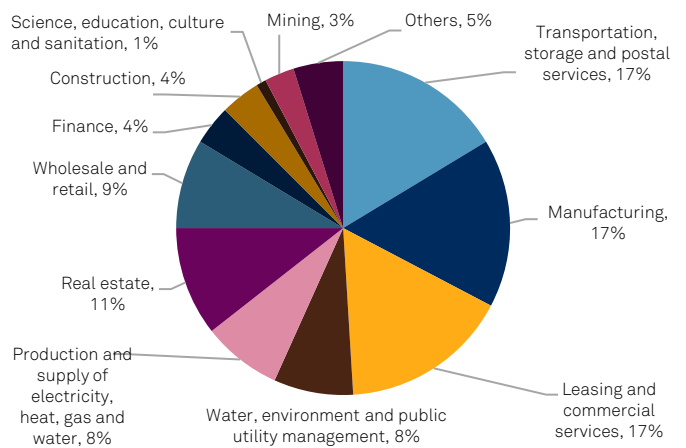
**Banking Sector's Loan Composition In 2020**



Source: Top 15 Chinese bank loan segment information, 2020 annual reports, S&P Global Ratings.

Chart 20

**Banking Sector's Corporate Loan Breakdown By Industry In 2020**

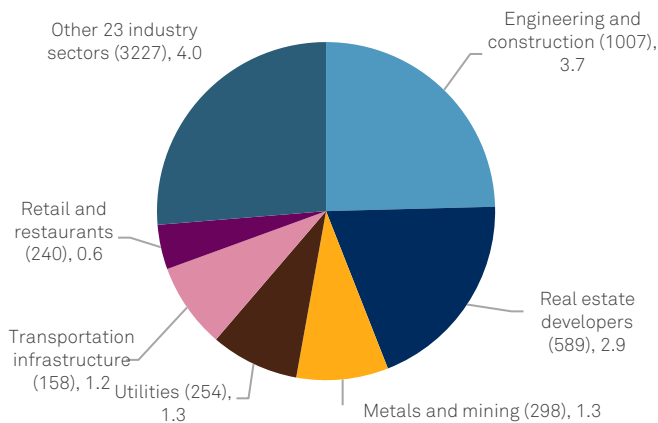


Source: Top 15 Chinese bank loan segment information, 2020 annual reports, S&P Global Ratings.

**Sample findings.** In our sample, construction-and-engineering and real estate sectors have the largest amount of debt. The two sectors make up a combined 45% of the corporate sample debt (see chart 21). The real estate sector comprises 20% of sample debt, which roughly tracks its contribution to GDP. Drilling down into these two sectors' samples, we find that the engineering and construction (E&C) sector has a higher proportion of highly indebted entities than real estate with a ratio of 91% versus 57% (see chart 22). Given the linkages of these two sectors, we are not surprised that investors are concerned about Evergrande, the wider property and construction sector, and its economic spillover to the economy. In passing, we note that most of the E&C entities we rate have diversified end-market exposure, spanning railways, highways, municipal works, housing, and power projects.

Chart 21

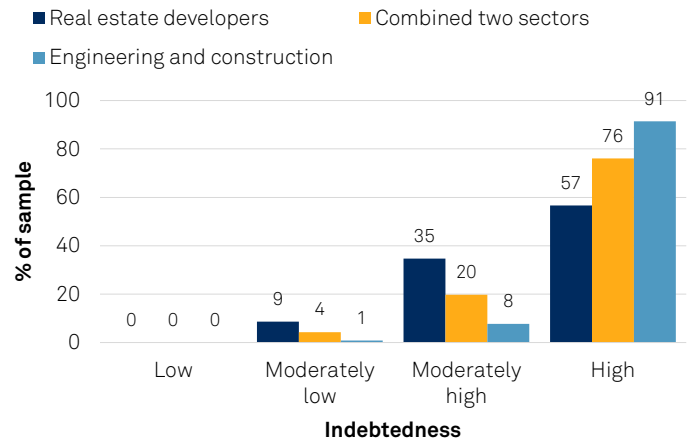
**China Corporate Sample: Debt Mix By Sector**



Note: Numbers in brackets refer to sector sample count. Numbers outside the brackets are the total debt of the sector in U.S.-dollars trillion. Source: S&P Global Market Intelligence.

Chart 22

**China Construction And Real Estate Sample, First Financial Half-Year 2021**



Note: Ratios are computed on a debt-weighted basis. Source: S&P Global Market Intelligence.

**But why is China's high corporate leverage coming into focus now?**

China's corporate leverage has been a challenge for the better part of a decade. China's central government has been long aware about this. The situation is coming to a head now primarily because of the government's policy to reduce financial risk, especially of speculative activity, in its economic system. Such reduction is expected to not only affect the real estate sector but also corporates and financial institutions in general. This policy stance requires coordination among government bodies to avoid missteps, as may have occurred in recent power brownouts through the country.

The decision to reduce system financial risk has been made against the backdrop of a years-long downward trend of China's GDP growth rate (see chart 23). Chinese authorities have recently tilted in favor of even more market discipline (allowing the inefficient and unsustainable companies to follow their natural course to default). We had in 2019 discussed that China's growth rate is likely to slow even further this decade (see "[Economic Research: China Credit Spotlight: The Great Game And An Inescapable Slowdown](#)," Aug. 29, 2019).

## Can China Escape Its Corporate Debt Trap?

Chart 23

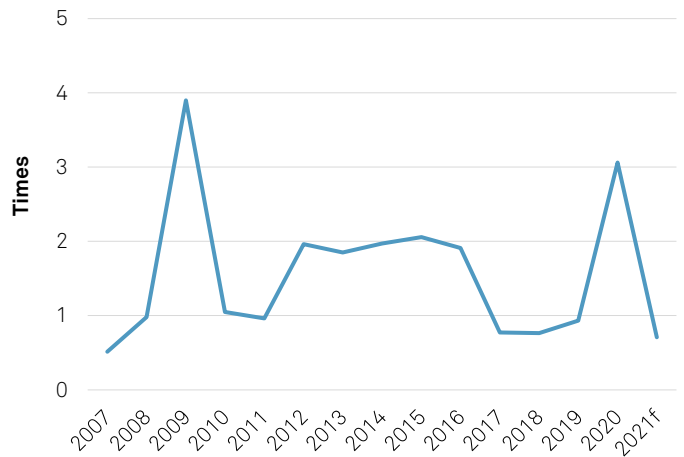
### China Corporate Debt Growth Versus Nominal GDP Growth



f--Forecast. Debt growth is in domestic currency. Source: GDP--World Bank except 2021f, which comes from S&P Global Ratings' "Sovereign Risk Indicators," July 13, 2021; debt--Bank for International Settlements except 2021f, which uses actual first quarter 2021 data as a proxy.

Chart 24

### Corporate Debt Growth Over Nominal GDP Growth



f--Forecast. Debt growth is in domestic currency. Source: GDP--World Bank except 2021f, S&P Global Ratings' "Sovereign Risk Indicators," July 13, 2021; debt--Bank for International Settlements except 2021f, which uses actual first quarter 2021 data as a proxy.

**Middle income trap.** This raises the possibility the country getting caught in a "middle-income trap." This is where a country is unable to increase its GNP per capita above the middle-income level, due to a poor transition to more productive and innovative industries. Indeed, China's corporate debt has for well over a decade mostly grown faster than its contribution to GDP (as indicated in chart 24, in which the trend line largely stays above "1 times").

## Can China escape its corporate debt trap?

Yes, but only with significant pain and perseverance.

**Debt trap.** The classic debt trap is where debt growth has fueled income growth over an extended period. It then becomes difficult for borrowers and authorities to cut back the former without sacrificing the latter.

**Three red lines.** In August 2020, the Chinese government established the so-called "three red lines" policy on major property developers. The measure limits the entities' debt growth by requiring these companies to adhere to: (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; and (3) a cash to short-term borrowing ratio of at least one. Failure to meet all three requirements would cap a developer's annual debt growth rate at 0%.

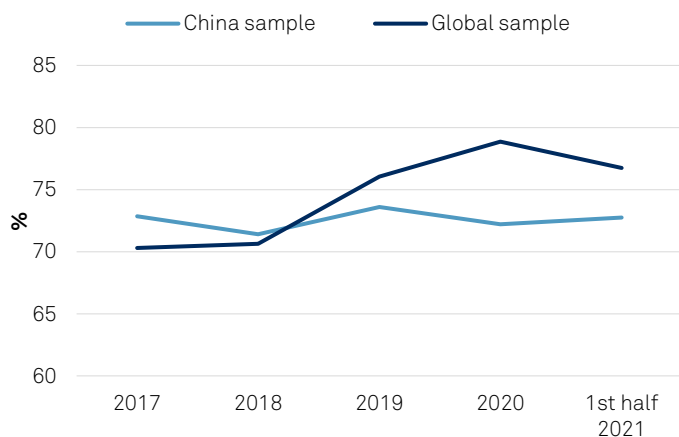
**Balance sheet gearing.** Could the authorities require a similar cap on net debt to equity requirement for all major corporates, not just property developers? Possibly, but we are uncertain whether that it will achieve the twin goals of lower debt and acceptable economic growth. Our sample of China corporates show an adjusted debt-to-equity ratio of 73% (we compute adjusted debt by deducting 75% of cash equivalents from gross debt) which is already better than the 77% global average (see chart 25).

## Can China Escape Its Corporate Debt Trap?

**Not equity, productivity.** We suggest the problem is more to do with productivity than the lack of equity, at least at the macro level. The return on capital (EBITDA over gross debt plus equity) for the China sample was 7.1% for first financial half-year 2021, a third lower than the global pool's 11.7% (see chart 26).

Chart 25

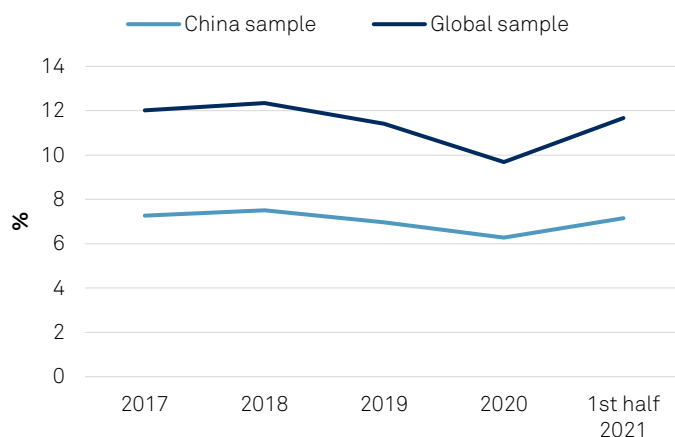
### Adjusted Debt/Equity: China Sample Versus Global



Note: Adjusted debt is gross debt less 75% of cash equivalents. Ratios are computed on a debt-weighted basis. Source: S&P Global Market Intelligence.

Chart 26

### EBITDA/Gross Debt Plus Equity: China Sample Versus Global



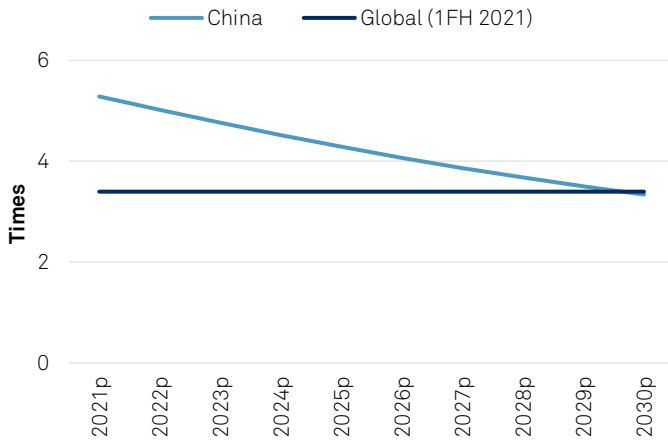
Note: Ratios are computed on a debt-weighted basis. Source: S&P Global Market Intelligence.

**Creative destruction.** It appears that China's central government is bent on a form of "creative destruction" (destroying the old to make way for the new). Increasingly, we see the government preferring more market-based solutions in resolving over-leveraged private sector firms through corporate actions such as debt restructurings. Lenders, among other stakeholders, are most affected. We could see higher levels of problematic assets as this policy direction continues to pick up momentum. The country's banks can weather these changing conditions with their reasonable provisioning and capital reserves. This capacity is uneven, given years of credit divergence and lingering pandemic issues have already eroded the financials of some of the weaker banks. While recent policies may test banking sector resilience, we can also expect the government to step in if signs of financial instability emerge.

**What-if scenario.** If China is to bring its corporate debt-to-GDP to almost the current global ratio of 101% from China's current 159% (see chart 28), entities would need to pay down or write down about 5% (specifically, 4.7%) of the initial debt amount each year, on an amortizing basis. In such a scenario, China's corporate adjusted debt-to-EBITDA could improve to the current global ratio of 3.4x, from China's current 5.3x, by 2030 (see chart 27). Note in this scenario, we do not presume that there is no new debt. Rather it is presumed that the annual growth rates of EBITDA and new debt are at the same rate during the period.

Chart 27

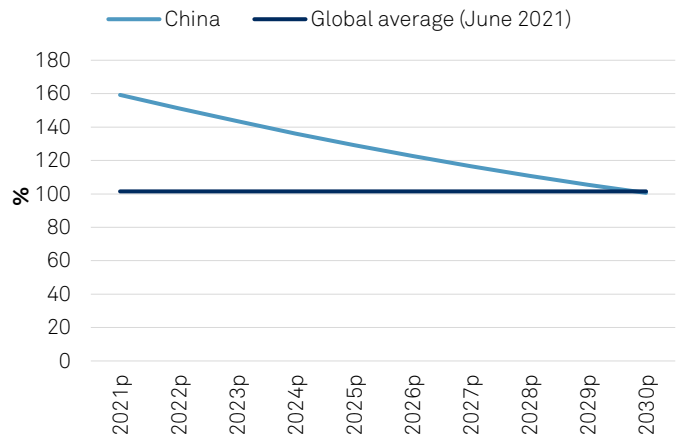
**Scenario: China Corporate Sample's Adjusted Debt/EBITDA**



Note: Ratios are computed on a debt-weighted basis. p--Projected. 1FH--Financial first half. Source: S&P Global Market Intelligence.

Chart 28

**Scenario: China Corporate Debt-To-GDP**



Note: Ratios are computed on a debt-weighted basis. p--Projected. Source: International Institute of Finance.

**Managing less-productive debt.** Is the above scenario feasible? It would require the central government to either allow or put this into effect. It would not be the first time that the authorities have addressed less-productive debt in the system. Note that less-productive debt does not equal nonperforming loans (NPLs), just that the productivity is low. The last major exercise in dealing with NPLs was after the 1997-1998 Asian financial crisis when the government set up four state-owned distressed asset management companies to take over NPLs worth about Chinese renminbi (RMB) 1.4 trillion from the major state-owned commercial banks (see "[China Banking's Two Faces](#)," Nov. 25, 2003). In 2002, we had estimated that the actual NPLs in China's banking system could be as high as 50% of total loans (see "[China Banks Face Decade of Problem Loans Unless More Equity Injected](#)," May 9, 2002). By 2012, China had managed to reduce the nonperforming asset ratio down to 1.6% (see "[Banking Industry Country Risk Assessment: China](#)," Jan. 9, 2014).

This is not to underestimate the size of the task. It is going to be a long and hard journey.

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## Related Research

- [China Balances Policy Risk With A Need For Reform](#), Oct. 11, 2021.
- [Fantasia Holdings Downgraded To 'SD' On Missed Principal Payment](#), Oct. 5, 2021.
- [Credit Conditions Asia-Pacific Q4 2021: COVID Besets, China Resets](#), Sept. 28, 2021.
- [Credit FAQ: Evergrande Default Contagion Risk--Ripple Or Wave?](#), Sept. 20, 2021.
- [Banking Industry Country Risk Assessment: China](#), Aug. 9, 2021.
- [Sovereign Risk Indicators](#), July 13, 2021.
- [China Bond Defaults 2021: More Tolerance For Bigger Hits](#), June 23, 2021.
- [China Property Watch: Issuers Go On A Debt Diet](#), Nov. 12, 2020.
- [Economic Research: China Credit Spotlight: The Great Game And An Inescapable Slowdown](#), Aug. 29, 2019.
- [Global Corporate Credit: Twin Debt Booms Pose Risks As Companies Seek US\\$57 Trillion Through 2019](#), July 16, 2015.
- [Banking Industry Country Risk Assessment: China](#), Jan. 9, 2014.
- [China Credit Spotlight: Significant Financial Risks Fan The Flames For China's Top Corporates](#), Sept. 11, 2012.
- [China Banking's Two Faces](#), Nov. 25, 2003.

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## Appendix: Sampling

This appendix discusses the assumptions, data sources, and approach adopted in this article.

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**Sample source of corporate financials** We draw our global sample of nonfinancial corporate financial data from S&P Global Market Intelligence's Capital IQ database. The sample comprises 25,210 corporates, of which 87% are listed and 91% are unrated. The Chinese sub-sample comprises 5,773 corporates.

The sample total debt of US\$42.2 trillion is equivalent to about 49% of estimated global corporate debt at end-June 2021 (source of global nonfinancial corporate debt amount: International Institute of Finance).

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**Sample sector scope** The global sample is categorized into 23 industry sectors: aerospace and defense; agribusiness and commodity foods; auto original equipment manufacturer (OEM); auto suppliers; building materials; business and consumer services; capital goods; chemicals; consumer goods; containers and packaging; engineering and construction; forest and paper products; health care services; leisure, media and entertainment; metals and mining; oil and gas; pharmaceuticals; real estate; retail; technology; telecommunications; transportation; and utilities.

The engineering and construction sector includes commercial construction and engineering, construction support services, heavy construction, prefabricated buildings and components and specialty contract work subsectors.

The real estate sector includes real estate development, real estate operating companies and real estate services subsectors.

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**Sample geographic scope** The global sample is drawn from 60 geographies, which we believe is a good representation of the global nonfinancial corporate population.

- **Asia-Pacific:** Australia (AU), mainland China (CN), Hong Kong (HK), India (IN), Indonesia (ID), Japan (JP), Korea (KR), Malaysia (MY), New Zealand (NZ), Pakistan (PK), Philippines (PH), Singapore (SG), Taiwan (TW), Thailand (TH), Vietnam (VN).
- **Europe:** Austria (AT), Belgium (BE), Cyprus (CY), Czech Republic (CH), Denmark (DK), Estonia (EE), Finland (FI), France (FR), Germany (DE), Greece (GR), Hungary (HU), Ireland (IE), Italy (IT), Latvia (LV), Lithuania (LT), Luxembourg (LU), Malta (MT), Netherlands (NL), Norway (NO), Poland (PL), Portugal (PT), Russia (RU), Slovakia (SK), Slovenia (SI), Spain (ES), Sweden (SE), Switzerland (CH), Turkey (TR), Ukraine (UA), United Kingdom (UK).
- **Latin America:** Brazil (BR), Chile (CL), Colombia (CO), Mexico (MX), Peru (PE).
- **Middle-East, Africa:** Egypt (EG), Ghana (GH), Israel (IL), Kenya (KE), Nigeria (NG), Saudi Arabia (SA), South Africa (ZA), United Arab Emirates (AE).
- **North America:** Canada (CA), United States (US).

The data have a bias toward nonfinancial corporates that had reported their first financial half-year 2021 financials at the date of sample extraction. Consequently, it's not surprising to see some geographic regions over or under-represented on a debt-weighted basis in the sample compared with the global population (source of global nonfinancial corporate population debt amount: International Institute of Finance).

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**Notional credit risk levels** For this exercise, we determined notional credit risk levels for each corporate in the sample. In this respect, our evaluation of the country, industry, and financial risks of the corporate sample is partially, but incompletely, borrowed from our Corporate Ratings methodology (see "[Criteria/ Corporates/ General/ Corporate Methodology](#)," Nov. 19, 2013). It is important to note that information limitations do not permit full application of such methodology.

We categorized the evaluations into four notional credit risk levels: "low indebtedness", "moderately low indebtedness", "moderately high indebtedness", and "high indebtedness" as a proxy for credit risk.



## Can China Escape Its Corporate Debt Trap?

### Key ratios and thresholds

In this exercise, we assess financial risk based on the following ratios: debt-to-EBITDA and FFO-to-debt.

- EBITDA is earnings before interest, tax and depreciation and amortization expenses, over a financial year.
- FFO is funds from operations over a financial year; it is calculated by deducting net interest expense and tax expense from EBITDA.
- Debt here is adjusted debt where we deduct 75% of cash equivalents from gross debt.

### All sectors except for real estate and utilities

Category	FFO to debt (%)	Debt to EBITDA (x)
Low indebtedness	Greater than 45	Less than 2
Moderately low indebtedness	30-45	2-3
Moderately high indebtedness	20-30	3-4
High indebtedness	Less than 12	Greater than 4

### Real estate

Category	FFO to debt (%)	Debt to EBITDA (x)
Low indebtedness	Greater than 15	Less than 4.5
Moderately low indebtedness	9-15	4.5-7.5
Moderately high indebtedness	7-9	7.5-9.5
High indebtedness	Less than 7	Greater than 9.5

### Utilities

Category	FFO to debt (%)	Debt to EBITDA (x)
Low indebtedness	Greater than 23	Less than 2
Moderately low indebtedness	13-23	3-4
Moderately high indebtedness	9-13	4-5
High indebtedness	Less than 9	Greater than 5

## Can China Escape Its Corporate Debt Trap?

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