S&P Global
Ratings

Global Debt Leverage

What If Chinese Corporate Earnings Further Decline?

A stress test of more than 3,400 unrated Chinese corporates

Oct. 18, 2023

This report does not constitute a rating action

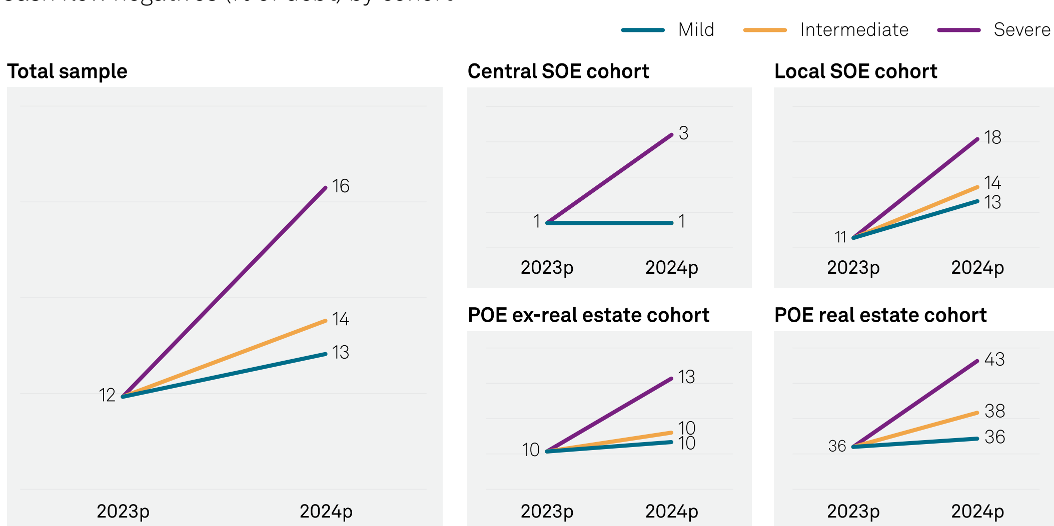
Key Takeaways

- **Dissonance between economic growth and corporate earnings.** Despite a rebound in China's GDP, corporate earnings have declined. For a sample of 3,454 Chinese corporates (mostly unrated), EBITDA fell 2.7% year on year in first-half 2023.
- **What if Chinese corporate earnings further decline?** Stress testing the sample with EBITDA declines in 2024 of 4% (mild scenario), 8% (intermediate) and 16% (severe), the sample's cash flow negative ratio (i.e., corporates with negative EBITDA or funds from operations) rose to 13% (mild), 14% (intermediate) and 16% (severe) from 12% in 2023.
- **Impact is uneven.** The higher cash flow negative ratios should be largely manageable for banks and lenders. However, the effect varies across industries. Real estate development is worst hit with a 37% ratio (severe) from 27% in 2023.

Chart 1

China corporates' cash flow negatives could rise by up to a third in our earnings stress test

Cash flow negatives (% of debt) by cohort



Cash flow negative corporates are those with either negative EBITDA or funds from operations. SOE--State-owned enterprise. POE--Privately-owned enterprise. p--Projected. Data source: S&P Global Market Intelligence. Source: S&P Global Ratings.

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"China downside risk is high" is the title of our Credit Conditions Asia-Pacific Q4 2023 report, published Sept. 26, 2023, on RatingsDirect. China's economic growth momentum is stalling amid tepid domestic household and business confidence, and subdued global demand. Weak property demand, especially in lower-tier cities, could squeeze liquidity for property developers and real-estate dependent sectors (such as engineering and construction).

Slow property activities could also intensify the fiscal constraints of some local governments, limiting their ability to support the financing needs of state-owned enterprises (SOE) and some highly indebted local government financing vehicles (LGFVs). The result is a higher risk of defaults.

Concurrently, the way large corporate failures are handled may have unintended consequences, such as contagion fueled by falling confidence. Amid China's very high corporate leverage, economic growth could be further derailed should financiers curtail lending. Meanwhile, protracted periods of subdued consumer and business confidence could further exacerbate credit stresses, spilling into the banks' loan books and eroding their earnings buffers.

(1) What If Earnings Continue To Decline In 2024?

To broadly gauge the financial health of China's corporate sector, we sampled 3,454 entities (98% of which are unrated). These include 577 SOEs and 2,877 privately owned enterprises (POEs) (see table 1). Among the SOEs, 55 are central government-related (central SOEs) and 522 are local government-related (local SOEs). The POE real estate cohort is much more indebted as measured by a ratio of debt-to-earnings before EBITDA, with a staggering debt-to-EBITDA ratio of 22x (see chart 3). This compares with an average of 8.5x across other cohorts.

Despite our expectation for China's real GDP to grow at 4.8% in 2023 (see "Economic Research: Economic Outlook Asia-Pacific Q4 2023: Resilient Growth Amid China Slowdown", published Sept. 24, 2023), China's corporate earnings have been declining year to date throughout 2023, as reported by the National Bureau of Statistics. To address the question of "what if earnings continue to decline in 2024?" we applied stress tests of EBITDA declines in 2024 of 4% for the mild stress scenario; 8% for intermediate; and 16% for severe. The outcomes of the stress tests are summarized in table 1.

Table 1

China corporates' cash flow negatives could rise by up to a third in our earnings stress test

Cash flow negatives (% of debt) by cohort

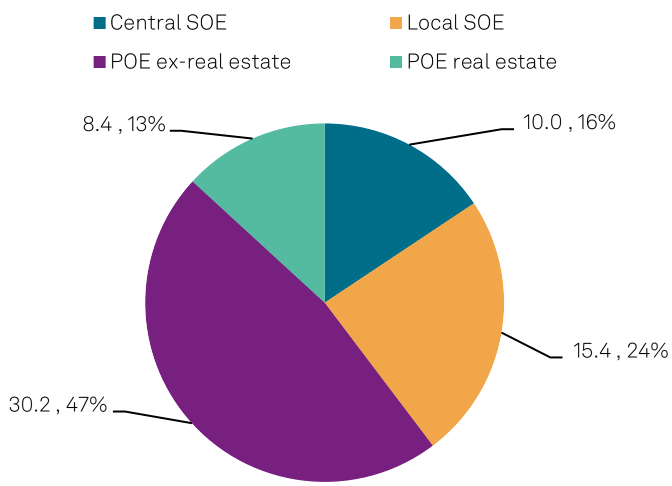
					Stress scenario 2024p		
	Sample count	Sample debt (tril. RMB)	2022	2023p	Mild 2024p	Intermediate 2024p	Severe 2024p
Total sample	3,454	64.0	12%	12%	13%	14%	16%
Central SOE cohort	55	10.0	3%	1%	1%	1%	3%
Local SOE cohort	522	15.4	8%	11%	13%	14%	18%
POE ex-real estate cohort	2,658	30.2	9%	10%	10%	10%	13%
POE real estate cohort	219	8.4	39%	36%	36%	38%	43%

Cash flow negative corporates are those with either negative EBITDA or funds from operations. SOE--state-owned enterprise. POE--privately-owned enterprise. tril.--Trillion. RMB--Chinese renminbi. p--Projected. Data source: S&P Global Market Intelligence. Source: S&P Global Ratings.

Chart 2

POEs make up over half of Chinese corporate sample debt

Debt by cohort (tril. RMB), percent of sample

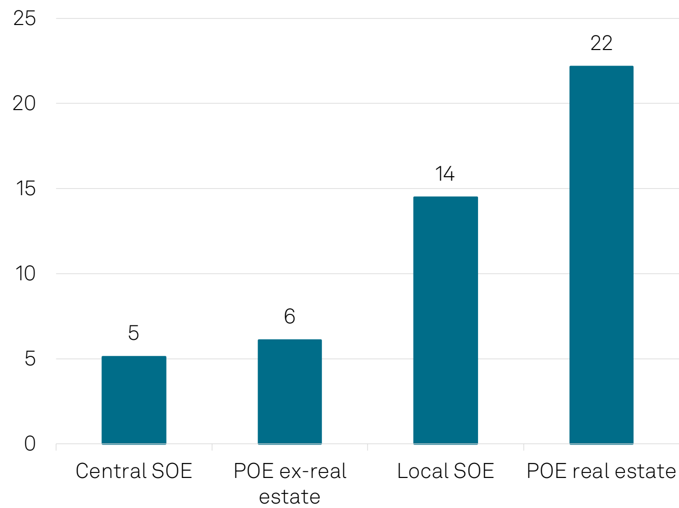


SOE--State-owned enterprises. POE--Privately owned enterprises.
Data source: S&P Global Market Intelligence. Source: S&P Global Ratings.

Chart 3

Real estate POEs have the highest debt/EBITDA ratio

Sample debt-to-EBITDA (x), 2023p



Debt here pertains to unadjusted debt. In our stress test approach, we use adjusted debt (which is gross debt less 75% of cash equivalents) to assess the financial risk of the corporate. p--Projected. SOE--State-owned enterprises. POE--Privately owned enterprises. Data source: S&P Global Market Intelligence. Source: S&P Global Ratings.

Table 2

Real estate development, leisure and sports, and transportation industries see highest cash flow negatives under severe earnings stress

Cash flow negatives (% of debt) of industries that are worse-performing

								Stress scenario 2024p		
	Count	Debt (tril. RMB)	2019	2020	2021	2022	2023p	Mild 2024p	Intermediate 2024p	Severe 2024p
Total	3,454	64.0	1%	5%	9%	12%	12%	13%	14%	16%
Real estate development	296	11.6	1%	5%	20%	31%	27%	28%	30%	37%
Leisure and sports	54	0.5	3%	51%	16%	32%	29%	29%	29%	31%
Transportation infrastructure	88	4.3	0%	7%	7%	13%	17%	24%	25%	30%
Transportation cyclical	41	1.6	0%	45%	48%	52%	15%	15%	15%	30%
Forest and paper products	31	0.4	0%	2%	0%	2%	6%	6%	6%	30%
Agribusiness and commodity foods	121	1.5	3%	1%	24%	4%	22%	22%	22%	22%

Cash flow negative corporates are those with either negative EBITDA or funds from operations. The industry sectors cited above contain a mix of state-owned enterprises and privately-owned enterprises. tril.--Trillion. RMB--Chinese renminbi. p--Projected. Please see Appendix 2 for detailed outcomes for all industries. Data source: S&P Global Market Intelligence. Source: S&P Global Ratings.

In our severe stress test, the cash flow negative ratio of the real estate development sector could rise by more than a third to 37% in 2024 from an already-elevated 27% in 2023 (see table 2). Sectors still climbing out of the COVID slump or dependent on mobility and consumption, also perform worse. These include leisure and sports (2024p severe: 31%) and transportation cyclical (30%). There are also warning signs for the transportation infrastructure sector (30%).

(2) Stress Test Assumptions

Sampling. The 3,454 corporates we tested are drawn from the CapitalIQ database of S&P Global Market Intelligence. The sample debt of Chinese renminbi (RMB) 64 trillion is equivalent to 32% of total China corporate debt (RMB197 trillion as of June 2023 per the Institute of International Finance). POEs make up 2,877 or 83% by sample count while SOEs (including central and local SOEs) total 577 or 17%.

Credit risk categories. Based on each corporate's country, industry, and financial risk characteristics, we place the corporate into a risk category: low, moderately low, moderately high, and high (see Appendix 1 for details):

- We arrive at the tiers by applying parts of our Corporate Ratings methodology (see "Criteria/ Corporates/ General/ Corporate Methodology," Nov. 19, 2013). (Note: Information limitations of the sample do not permit full application of the described methodology.)
- A special category we call "**cash flow negative,**" which are corporates whose funds from operations (FFO) or EBITDA are negative.

The assessments on both SOEs and POEs are on a stand-alone basis--meaning that we do not factor in any expectation of implicit support from a government or parent company.

Assumptions. Our stress test scenario assumes an EBITDA decline in 2024 over 2023 on the total sample by 4%, 8%, and 16% as the mild, intermediate, and severe stress respectively (4% was the decline in industrial profits in 2022 over 2021, as reported by the National Bureau of Statistics).

To determine the actual EBITDA haircut for each entity between 2023 and 2024, so as to arrive at the sample's EBITDA decline as outlined above, depends on the entity's industry earnings volatility score. The earnings volatility score is a reflection of the volatility of the industry's EBITDA margins, relative to other industries, and is computed using the industry's historical EBITDA-to-revenue sample financials. This means an earnings shock would more disproportionately hit entities that are assigned higher industry earnings volatility scores.

(3) Stress Test Outcomes

Mild, intermediate and severe earnings stress scenarios in 2024

Under EBITDA decline stresses of 4%, 8%, and 16%, the China sample's cash flow negative ratio could rise to 13%, 14%, and 16% respectively in 2024 from 12% in 2023. However, the earnings shock could be felt differently by each cohort.

- **POE real estate cohort:** This cohort could register the highest cash flow negative ratio of 43% in 2024 in the severe stress scenario (see chart 4), up from 36% in 2023. This cohort's cash flow negative ratio has been high to start with, having leapt almost tenfold to 39% in 2022 from 4% in 2020.

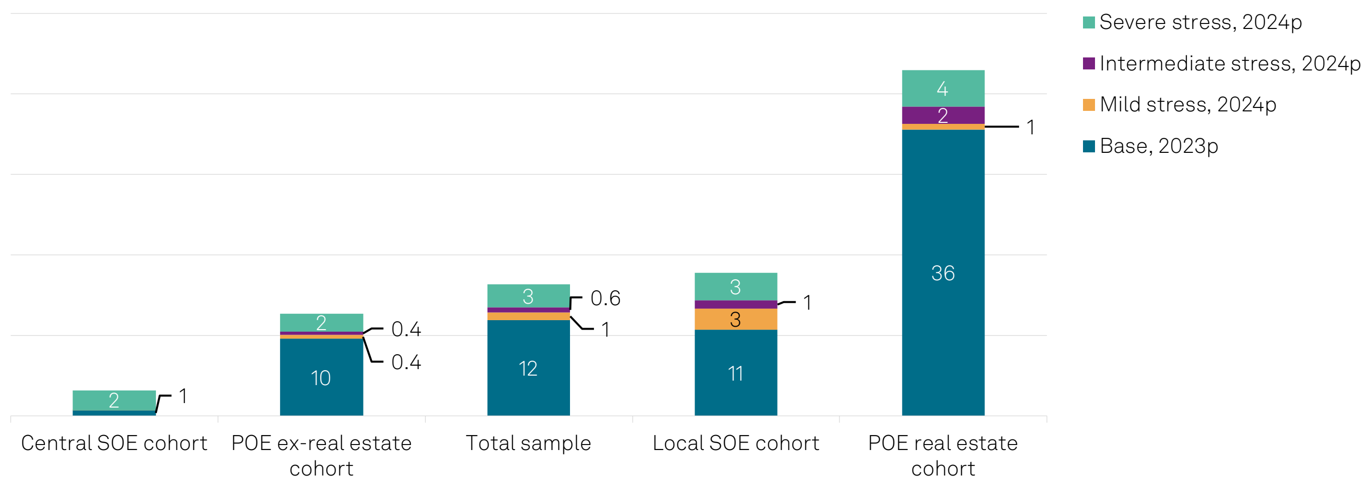
- **Local SOE cohort:** This cohort is second-worst performing, after POE real estate. Its cash flow negative ratio could jump to 18% (2023p: 11%) in severe stress. There is a large overhang of high-risk category debt in this cohort; not surprisingly, under stress, some of the debt quickly tips over into the cash flow negative category.

- **POE ex-real estate cohort:** This cohort's cash flow negative ratio could rise to 13% in 2024 in severe stress, compared with 10% in 2023. The less severe cash flow negative transition and outcome could be explained by the slightly lesser concentration of debt in the high-risk category.
- **Central SOE cohort:** This cohort is best performing. Its cash flow negative ratio could rise to just 3% in 2024 under severe stress (2023p: 1%).

Chart 4

Stress test outcomes: Cash flow negatives of real estate POEs and local SOEs are more sensitive under stress

Cash flow negatives (% of debt)



Cash flow negative corporates are those with either negative EBITDA or funds from operations. SOE--State-owned enterprise. POE--Privately-owned enterprise. p--Projected. Data source: S&P Global Market Intelligence. Source: S&P Global Ratings.

Not all cash flow negative entities will default

This is because not all cash flow negative corporates become nonperforming, not all corporates are funded by banks, and the denominator of the banks' nonperforming loan ratio frequently includes noncorporate loans (e.g., household loans). In respect of S&P Global Ratings' portfolio of China corporate ratings, many rated corporates tend to be market leaders. The cash flow positions of such companies may be improving while their laggard competitors (cash flow negatives) just tread water. So, the cohorts may be at opposite ends of the credit distribution curve.

Industry outcomes

The impact of an earnings decline on cash flow negatives is uneven across industries (see table 3). Given the prolonged downturn in China's property sector, it is not surprising that the cash flow negative ratio of real estate could fare worst--jumping by a third to 37% in 2024 (severe scenario) from 27% in 2023. For the POE cohort, the ratio reaches 43% from 36% over the same period.

The leisure and sports and transportation cyclical sectors, slow to climb out of the COVID slump, are also vulnerable. Under severe stress, their cash flow negative ratio could creep to 31% and 30% respectively in 2024, up from 29% and 15% in 2023. The transportation infrastructure sector also sees a substantial amount of debt transition into cash flow negative (30% (severe) in 2024 from 17% in 2023).

We caveat that the industry-level stress test outcomes under the severe stress scenario can be affected by large borrowers in the sample tipping into cash flow negative.

Table 3

Cash flow negative ratios of real estate, leisure and sports, and transportation sectors under severe stress are worst

Cash flow negatives (% of debt) of industries that are worse-performing

									Stress scenario 2024p		
Industry	**Cohort**	**Count**	**Debt (bil. RMB)**	**2019**	**2020**	**2021**	**2022**	**2023p**	**Mild 2024p**	**Intermediate 2024p**	**Severe 2024p**
Total sample	**Total**	**3,454**	**64,007**	**1%**	**5%**	**9%**	**12%**	**12%**	**13%**	**14%**	**16%**
	Central SOE	55	10,014	0%	3%	3%	3%	1%	1%	1%	3%
	Local SOE	522	15,393	2%	6%	4%	8%	11%	13%	14%	18%
	POE ex-real estate	2,658	30,167	1%	6%	8%	9%	10%	10%	10%	13%
	POE real estate	219	8,432	1%	4%	27%	39%	36%	36%	39%	43%
Real estate development	**Total**	**296**	**11,573**	**1%**	**5%**	**20%**	**31%**	**27%**	**28%**	**30%**	**37%**
	Central SOE	2	605	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	75	2,536	1%	9%	3%	11%	4%	8%	10%	26%
	POE	219	8,432	1%	4%	27%	39%	36%	36%	38%	43%
Leisure and sports	**Total**	**54**	**493**	**3%**	**51%**	**16%**	**32%**	**29%**	**29%**	**29%**	**31%**
	Central SOE										
	Local SOE	17	184	0%	6%	2%	39%	69%	69%	69%	69%
	POE	37	309	5%	74%	24%	28%	6%	6%	6%	8%
Transportation infrastructure	**Total**	**88**	**4,328**	**0%**	**7%**	**7%**	**13%**	**17%**	**24%**	**25%**	**30%**
	Central SOE	2	65	0%	100%	100%	100%	100%	100%	100%	100%
	Local SOE	42	2,711	0%	5%	6%	13%	19%	29%	29%	32%
	POE	44	1,553	0%	6%	5%	8%	12%	14%	16%	25%
Transportation cyclical	**Total**	**41**	**1,613**	**0%**	**45%**	**48%**	**52%**	**15%**	**15%**	**15%**	**30%**
	Central SOE	3	533	0%	28%	34%	40%	0%	0%	0%	45%
	Local SOE	5	250	0%	28%	52%	47%	1%	1%	1%	1%
	POE	33	830	0%	64%	58%	62%	29%	29%	29%	29%
Forest and paper products	**Total**	**31**	**416**	**0%**	**2%**	**0%**	**2%**	**6%**	**6%**	**6%**	**30%**
	Central SOE	1	92	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	2	57	0%	0%	0%	0%	19%	19%	19%	100%
	POE	28	267	0%	3%	0%	3%	6%	6%	6%	25%
Agribusiness and commodity foods	**Total**	**121**	**1,481**	**3%**	**1%**	**24%**	**4%**	**22%**	**22%**	**22%**	**22%**
	Central SOE	1	252	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	8	121	46%	6%	0%	0%	0%	0%	0%	0%
	POE	112	1,109	2%	1%	32%	6%	30%	30%	30%	30%

Cash flow negative corporates are those with either negative EBITDA or funds from operations. SOE--State-owned enterprise. POE--Privately-owned enterprise. RMB--Chinese renminbi. p--Projected. Please see Appendix 2 for detailed outcomes for all industries. Data source: S&P Global Market Intelligence. Source: S&P Global Ratings.

Related Research

- China Property Watch: A Slow, Sequential Recovery In 2024, Oct. 16, 2023
- Credit Conditions Asia-Pacific Q4 2023: China Downside Risk Is High, Sept. 26, 2023
- China Still Has More Policy Tools To Stabilize The Higher Tier Property Markets, Sep. 26, 2023
- Economic Outlook Asia-Pacific Q4 2023: Resilient Growth Amid China Slowdown, Sept. 25, 2023
- China's District And County Recovery Crimped By Property Slide And Debt Checks, Sep. 13, 2023
- China Policy Patches Alone Won't Fix LGFVs' Fraying Liquidity, Sep. 7, 2023
- Chinese Developers' Profitability Is Searching For A Trough, Sep. 4, 2023
- Credit FAQ: Will Country Garden's Woes Further Hobble China's Property Market?, Aug. 16, 2023
- Credit FAQ: What Are China's Options To Resolve Local-Government SOE Debt Risk?, Aug. 3, 2023
- Global Debt Leverage: China's SOEs Are Stuck In A Debt Trap, Sep. 20, 2022
- Global Debt Leverage: Can China Escape Its Corporate Debt Trap?, Oct. 19, 2021
- China Banking's Two Faces, Nov. 25, 2003
- China Banks Face Decade of Problem Loans Unless More Equity Injected, May 9, 2002

Appendix 1: Data And Approach

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

Corporate financials data source and sample	We drew our sample of mainland Chinese nonfinancial corporate financial data from S&P Global Market Intelligence's Capital IQ database. Financials are for first-half 2023. The sample comprises 3,454 mainland Chinese corporates, of which 98% are unrated and 74% are listed. The sample total debt of RMB64 trillion is equivalent to 32% of the estimated Chinese corporate population debt at June 2023 (as reported by the Institute of International Finance).
Caveats	The data have a statistical bias toward nonfinancial corporates that had reported their latest financials at the date of sample extraction. Consequently, some industry sectors may be over or underrepresented, on a debt-weighted basis, in the sample compared with the actual population.
Sample industry coverage	The sample contains 30 industry sectors: aerospace and defense; agribusiness and commodity foods; auto original equipment manufacturers (OEMs;) auto suppliers; building materials; business and consumer services; capital goods; commodity chemicals; consumer durables; containers and packaging; engineering and construction; forest and paper products; health care services; leisure and sports; media and entertainment; metals production and processing; mining; oil and gas drilling, equipment and services; oil and gas integrated, exploration and production; oil and gas refining and marketing; pharmaceuticals, real estate development; regulated utilities; retail and restaurants; specialty chemicals; technology hardware and semiconductors; technology software and services; telecommunications and cable; transportation cyclical; transportation infrastructure.
Sample geographic coverage	In this exercise, the geographic coverage of the sample of corporates is limited to mainland China (e.g., Hong Kong and Macao are excluded).
State-owned versus privately owned enterprises	State-owned enterprise (SOE) is a common term used for mainland Chinese nonfinancial corporates, listed or unlisted which are either owned, linked or effectively controlled by one or more of the central, provincial, city or other governments in mainland China. The controlling ownership of Chinese corporates are not always obvious. In this exercise, we drew on the experience of our International Public Finance analytical ratings team to help identify central and local SOEs. We classify non-SOE corporates as privately owned enterprises (POEs).
Growth assumptions	For debt growth projections, we applied growth rates estimated by our analytical teams for 2023-2024.
Notional credit risk tiers	In this exercise, we determined notional credit risk tiers 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 corporates into notional credit risk tiers--low indebtedness, moderately low indebtedness, moderately high indebtedness, high indebtedness. We have a special category called cash flow negative, which are corporates whose funds from operations (FFO) or earnings before interest, tax and depreciation and amortization expense (EBITDA) are negative. Distributions of risk tiers in this article are debt weighted. We assess both SOEs and POEs on a stand-alone basis--meaning that we do not factor in any expectation of implicit support from a government or parent company.

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.
– FFO is funds from operations, which is calculated by deducting net interest expense and tax expense from EBITDA.
– Adjusted debt is after deducting 75% of cash equivalents from gross debt.

All sectors except for real estate and utilities

Risk tier	FFO to debt (%)	Adjusted 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 20	Greater than 4

Real estate

Risk tier	FFO to debt (%)	Adjusted 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

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

Appendix 2: Stress Scenario Outcomes By Industry & Cohort

Table A1

Cash flow negative corporates by industry, broken down by cohort

Cash flow negatives (% of debt)

									Stress scenario 2024p		
Industry	**Cohort**	**Count**	**Debt (bil. RMB)**	**2019**	**2020**	**2021**	**2022**	**2023p**	**Mild 2024p**	**Intermediate 2024p**	**Severe 2024p**
Total sample	**Total**	**3,454**	**64,007**	**1%**	**5%**	**9%**	**12%**	**12%**	**13%**	**14%**	**16%**
	Central SOE	55	10,014	0%	3%	3%	3%	1%	1%	1%	3%
	Local SOE	522	15,393	2%	6%	4%	8%	11%	13%	14%	18%
	POE ex-real estate	2,658	30,167	1%	6%	8%	9%	10%	10%	10%	13%
	POE real estate	219	8,432	1%	4%	27%	39%	36%	36%	38%	43%
Aerospace and defense	**Total**	**22**	**62**	**0%**	**0%**	**3%**	**4%**	**0%**	**0%**	**0%**	**0%**
	Central SOE	2	17	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	3	3	0%	0%	76%	78%	5%	5%	5%	5%
	POE	17	43	0%	0%	0%	0%	0%	0%	0%	0%
Agribusiness and commodity foods	**Total**	**121**	**1,481**	**3%**	**1%**	**24%**	**4%**	**22%**	**22%**	**22%**	**22%**
	Central SOE	1	252	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	8	121	46%	6%	0%	0%	0%	0%	0%	0%
	POE	112	1,109	2%	1%	32%	6%	30%	30%	30%	30%
Auto OEM	**Total**	**11**	**471**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**
	Central SOE										
	Local SOE	1	172	0%	0%	0%	0%	0%	0%	0%	0%
	POE	10	299	0%	0%	0%	0%	0%	0%	0%	0%
Auto suppliers	**Total**	**112**	**259**	**1%**	**2%**	**1%**	**6%**	**2%**	**2%**	**2%**	**2%**
	Central SOE										
	Local SOE	2	7	0%	0%	0%	0%	0%	0%	0%	0%
	POE	110	252	1%	3%	1%	6%	2%	2%	2%	2%
Building materials	**Total**	**68**	**962**	**0%**	**0%**	**1%**	**2%**	**1%**	**1%**	**1%**	**1%**
	Central SOE	3	302	0%	0%	0%	1%	1%	1%	1%	1%
	Local SOE	3	139	0%	0%	0%	0%	0%	0%	0%	0%
	POE	62	521	0%	1%	1%	3%	1%	1%	1%	1%
Business and consumer services	**Total**	**129**	**1,353**	**0%**	**11%**	**11%**	**10%**	**3%**	**3%**	**3%**	**3%**
	Central SOE	1	201	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	12	300	0%	0%	0%	0%	4%	4%	6%	6%
	POE	116	852	0%	17%	18%	15%	3%	3%	3%	3%
Capital goods	**Total**	**372**	**1,532**	**2%**	**6%**	**10%**	**5%**	**4%**	**4%**	**5%**	**5%**

	Central SOE	5	67	0%	0%	13%	0%	0%	0%	0%	0%
	Local SOE	12	246	8%	7%	1%	1%	1%	1%	1%	1%
	POE	355	1,220	0%	6%	12%	6%	5%	5%	5%	5%
Commodity chemicals	**Total**	**195**	**1,661**	**1%**	**0%**	**1%**	**2%**	**4%**	**4%**	**4%**	**4%**
	Central SOE	1	2	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	8	67	0%	0%	0%	0%	4%	4%	4%	4%
	POE	186	1,592	1%	0%	1%	2%	4%	4%	4%	4%
Consumer durables	**Total**	**166**	**765**	**1%**	**8%**	**6%**	**13%**	**16%**	**16%**	**16%**	**16%**
	Central SOE	1	6	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	7	158	0%	0%	0%	7%	0%	0%	0%	0%
	POE	158	601	1%	9%	7%	14%	20%	20%	20%	20%
Containers and packaging	**Total**	**23**	**21**	**0%**	**1%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**
	Central SOE										
	Local SOE										
	POE	23	21	0%	1%	0%	0%	0%	0%	0%	0%
Engineering and construction	**Total**	**406**	**13,781**	**2%**	**4%**	**4%**	**5%**	**13%**	**14%**	**14%**	**15%**
	Central SOE	10	2,994	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	170	4,198	5%	7%	3%	4%	9%	10%	10%	10%
	POE	226	6,589	2%	4%	5%	8%	22%	23%	24%	24%
Forest and paper products	**Total**	**31**	**416**	**0%**	**2%**	**0%**	**2%**	**6%**	**6%**	**6%**	**30%**
	Central SOE	1	92	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	2	57	0%	0%	0%	0%	19%	19%	19%	100%
	POE	28	267	0%	3%	0%	3%	6%	6%	6%	25%
Health care services	**Total**	**75**	**425**	**0%**	**1%**	**3%**	**11%**	**4%**	**4%**	**4%**	**4%**
	Central SOE	2	102	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	2	68	0%	0%	0%	0%	0%	0%	0%	0%
	POE	71	256	0%	1%	4%	17%	7%	7%	7%	7%
Leisure and sports	**Total**	**54**	**493**	**3%**	**51%**	**16%**	**32%**	**29%**	**29%**	**29%**	**31%**
	Central SOE										
	Local SOE	17	184	0%	6%	2%	39%	69%	69%	69%	69%
	POE	37	309	5%	74%	24%	28%	6%	6%	6%	8%
Media and entertainment	**Total**	**70**	**632**	**0%**	**5%**	**2%**	**8%**	**2%**	**2%**	**2%**	**2%**
	Central SOE										
	Local SOE	8	29	0%	0%	0%	47%	0%	0%	0%	0%
	POE	62	602	0%	6%	2%	7%	2%	2%	2%	2%
Metals production and processing	**Total**	**147**	**3,264**	**0%**	**0%**	**0%**	**9%**	**3%**	**3%**	**6%**	**15%**
	Central SOE	3	320	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	21	785	0%	0%	0%	10%	14%	14%	26%	26%

	POE	123	2,159	1%	0%	0%	11%	0%	0%	0%	13%
Mining	**Total**	**47**	**1,866**	**1%**	**1%**	**1%**	**0%**	**0%**	**0%**	**0%**	**2%**
	Central SOE	2	125	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	9	216	0%	2%	0%	0%	0%	0%	0%	0%
	POE	36	1,524	1%	1%	1%	0%	0%	0%	0%	2%
Oil and gas drilling, equipment and services	**Total**	**23**	**55**	**0%**	**8%**	**14%**	**15%**	**6%**	**15%**	**15%**	**15%**
	Central SOE	1	23	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE										
	POE	22	32	0%	15%	27%	27%	10%	26%	26%	26%
Oil and gas integrated, exploration and production	**Total**	**20**	**1,550**	**0%**	**2%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**
	Central SOE	2	686	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	6	333	0%	11%	0%	0%	0%	0%	0%	0%
	POE	12	530	1%	0%	0%	0%	0%	0%	0%	0%
Oil and gas refining and marketing	**Total**	**3**	**178**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**
	Central SOE										
	Local SOE										
	POE	3	178	0%	0%	0%	0%	0%	0%	0%	0%
Pharmaceuticals	**Total**	**149**	**478**	**0%**	**2%**	**4%**	**3%**	**1%**	**2%**	**2%**	**2%**
	Central SOE	1	0.1	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	9	18	0%	10%	25%	0%	0%	0%	0%	0%
	POE	139	460	0%	2%	3%	3%	1%	2%	0%	2%
Real estate development	**Total**	**296**	**11,573**	**1%**	**5%**	**20%**	**31%**	**27%**	**28%**	**30%**	**37%**
	Central SOE	2	605	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	75	2,536	1%	9%	3%	11%	4%	8%	10%	25%
	POE	219	8,432	1%	4%	27%	39%	36%	36%	38%	43%
Regulated utilities	**Total**	**152**	**7,195**	**0%**	**1%**	**3%**	**2%**	**3%**	**3%**	**3%**	**3%**
	Central SOE	6	3,194	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	42	1,033	0%	3%	4%	5%	14%	14%	14%	14%
	POE	104	2,968	0%	0%	7%	3%	3%	3%	3%	3%
Retail and restaurants	**Total**	**186**	**4,650**	**4%**	**7%**	**5%**	**9%**	**8%**	**9%**	**9%**	**12%**
	Central SOE										
	Local SOE	48	1,514	1%	7%	4%	7%	16%	16%	16%	16%
	POE	138	3,136	5%	6%	5%	9%	5%	6%	6%	9%
Specialty chemicals	**Total**	**78**	**390**	**18%**	**15%**	**2%**	**5%**	**1%**	**3%**	**3%**	**4%**
	Central SOE										
	Local SOE	1	37	0%	0%	0%	0%	0%	0%	0%	0%
	POE	77	353	21%	17%	2%	6%	1%	3%	3%	4%

Technology hardware and semiconductors	**Total**	**276**	**2,004**	**0%**	**2%**	**4%**	**5%**	**4%**	**4%**	**4%**	**5%**
	Central SOE	3	279	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE	8	209	0%	0%	0%	0%	0%	0%	0%	0%
	POE	265	1,516	0%	4%	5%	7%	5%	5%	0%	0%
Technology software and services	**Total**	**87**	**278**	**0%**	**4%**	**4%**	**4%**	**9%**	**9%**	**9%**	**10%**
	Central SOE	1	5	0%	0%	0%	0%	100%	100%	100%	100%
	Local SOE	1	0.4	0%	0%	0%	0%	0%	0%	0%	0%
	POE	85	273	0%	4%	4%	4%	7%	7%	7%	8%
Telecommunications and cable	**Total**	**6**	**270**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**
	Central SOE	2	145	0%	0%	0%	0%	0%	0%	0%	0%
	Local SOE										
	POE	4	124	0%	0%	0%	0%	0%	0%	0%	0%
Transportation cyclical	**Total**	**41**	**1,613**	**0%**	**45%**	**48%**	**52%**	**15%**	**15%**	**15%**	**30%**
	Central SOE	3	533	0%	28%	34%	40%	0%	0%	0%	45%
	Local SOE	5	250	0%	28%	52%	47%	1%	1%	1%	1%
	POE	33	830	0%	64%	58%	62%	29%	29%	29%	29%
Transportation infrastructure	**Total**	**88**	**4,328**	**0%**	**7%**	**7%**	**13%**	**17%**	**24%**	**25%**	**30%**
	Central SOE	2	65	0%	100%	100%	100%	100%	100%	100%	100%
	Local SOE	42	2,711	0%	5%	6%	13%	19%	29%	29%	32%
	POE	44	1,553	0%	6%	5%	8%	12%	14%	16%	25%

SOE--state-owned enterprise. POE--privately-owned enterprise. bil.--Billion. RMB--Chinese renminbi. p--Projected. Data source: S&P Global Market Intelligence. Source: S&P Global Ratings.

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